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1907 - Report of the California State Agricultural Society for 1906

REPORT

OF THE

CALIFORNIA STATE AGRICULTURAL SOCIETY

FOR THE YEAR 1906

SACRAMENTO:
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1907.

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REPORT

OF THE

STATE AGRICULTURAL SOCIETY.

To His Excellency, JAMES N. GILLETT,
Governor of the State of California,

SIR: We take pleasure in submitting herewith the fifty-third Annual Report of the State Agricultural Society. You will find herein some special articles on pertinent subjects, copies of some of the bulletins issued by the Society during the year, and a review of the physical conditions and characteristics of most of the counties of the State, with statistics showing the farm acreage, the assessable wealth, and the industrial resources of the said counties.

These statistics are obtained from statisticians appointed in the different counties by the respective Boards of Supervisors, pursuant to an Act of the Legislature approved March 20, 1905. Some Boards of Supervisors yet show an indifference to this provision of the law, and yet we are pleased to state that quite a number more counties sent in reports for last year than did for the year before. We believe now that as soon as the respective Boards of Supervisors begin to see and realize the value of the work which their united effort will render to their several localities and to the State at large, they will perform their part of it with pleasure, and when they do—when all the counties shall report fully and intelligently—we will be able to issue an annual summary of unusual interest and of very great value to the State and all its interests. When all report, the figures can be compiled in tables showing not only the county's output, but State aggregates, and such showing will at once become of incalculable value to every property owner and prospective investor in California. At present we are compelled to present the showing from each county separately, as aggregates are of little value unless complete. But even in the present crude form the report is in great demand.

The issue last year, not so complete as this, has become exhausted, and had the edition been ten times as large as it was we could have dis-

tributed every copy to advantage. Besides the constant and increasing demand from individuals at home and abroad, commercial bodies in California, and people elsewhere interested in exploiting this State, have made requisitions far in excess of the supply, to be used by them as an immigration document.

Valuable as this report may be regarded, however, and great as may be the demand for it, we are restricted in the size of the edition by the limit of our printing fund. When all the counties participate, as they should, and the value of the report becomes to be recognized by all the people, as it doubtless will, then we anticipate legislative representatives from all the counties will provide a way for increasing the edition equal to the demand.

In line with the statistical work imposed on this Society, and which has been too much neglected, we have made a compilation of the cereal acreage and output and value in California for the year 1905, and also for the year 1906, and these articles will be found herein. In the meantime, beginning with last spring, the Society has undertaken the issuing of periodical bulletins on crop conditions in the State, and on various industrial subjects of present interest to the people. These have been largely copied by the press and have met with general approval. A few of the industrial bulletins of standing interest are embodied in this report.

In October last our Secretary went East as a delegate to the Farmers' National Congress, and improved the opportunity while away to visit the Fair grounds of seven states, and interview the officers of the different Societies on the line of their work and the system practiced by them in obtaining crop reports and agricultural and other industrial statistics. He thinks the Ohio system can be most easily adapted to our use, and accordingly he is now at work trying to organize the necessary corps of correspondents, and preparing the blanks for their use. This system contemplates a correspondent in each political township in the State, and to obtain the addresses of suitable people and their consent to serve is no trifling task. It is believed, however, the result will be worth the effort, since from such direct source, when once in working order, not only crop reports through the season, but reports on industrial progress in any line or calling, or on any subject about which information may be desired, will be available and of the most reliable character.

The present management conceives it the duty of the Society to do these things, and in all other ways within its means and working force make itself valuable to the agricultural and other industrial interests of California.

It should be known and appreciated, however, that it is handicapped in its work between fairs for want of means, and handicapped in its

fairs by reason of an incongruous condition which requires it to divide its attractions and impose a double admission on visitors. Such an arrangement exists in no other State that we know of, certainly not in any of the states that hold successful fairs, and the sooner arrangements can be made for erecting suitable buildings at the Park for the display of industrial products so that all the fair and all its attractions will be together in one inclosure, with one admission, one set of gatekeepers and one set of officers, the sooner it will be started on that road which gives assurance of leading to success.

Our State Fairs of recent years have not been all that they should have been. The exhibits of farm and other industrial products became to be not only less in quality and variety than they ought to be, but they were becoming also too much localized. Instead of representing all products from all the State, they represented only a few of the products from near-by localities. This condition was recognized by the management and it was determined to remedy it so far as energy and effort, hampered by limited means to work with, could do so. Last spring, therefore, an effort was started to overcome the grounds of complaint and get up a fair that would more nearly represent all of California's rich and varied resources. About the time, however, that the campaign for a bigger and better and more representative State Fair was planned the unprecedented disaster by earthquake and fire overtook the City of San Francisco and other cities near the San Francisco Bay. This appalling calamity so absorbed the attention of the people of the State and called for such demands on charity and energy, that the appeals for exhibits and interest in the State Fair became hushed by the louder cry for immediate help for suffering humanity. In face of the condition caused by this disaster, and its exhausting drain on individuals, communities and public bodies, the difficulties of working up the last fair was greatly increased, and yet, as indicating what persistent energy can do in the face of difficulties, the State Fair of 1906 was a comparative success. For once samples at least of all the products of all the State were displayed. More counties participated than ever before, and those counties with their diversified products covered all the distinctive portions of California from Siskiyou on the north to San Diego on the south, and from the forests of the coast to the mines in the mountains.

The Sacramento *Union,* which has reported perhaps all the State Fairs ever held in California, and which ought to be capable of making just comparisons, summarized the Pavilion exhibit of the last fair as follows:

If any one doubts that the State Fair exposition at the pavilion is the most representative of the natural resources of the State that has been made, the doubt must arise out of misconception of resources or forgetfulness of the past exhibitors.

If one should resolve to choose any particular feature as most representative, and of highest informing value, he would be unable to reach a definite conclusion between the mineral and the purely agricultural and horticultural exhibits, to say nothing of those of products which lie at the foundation of leading manufacturing interests. In the effort to decide and reach the judgment desired it is probable that the fair-minded examiner will return the verdict of the hung jury, and let it go at that.

In making a comprehensive review of the pavilion exhibits, what must first strike the observer is the wide geographical range of the show; that is to say, its comprehensiveness reaches geographically from San Diego on the Mexican border to Siskiyou on the Oregon line and from the Nevada boundary on the east to the tides of the Pacific on the west. This is not to say that every county is represented—that was hardly to have been expected, for they number considerably more than a half hundred—but it is to say that very nearly all products of this State of growth or mine are represented fully, handsomely, and with teaching and informing effect, while most of the industries leading out of growth or mine have their representative suggestions.

But in addition to the mineral wealth of the State being established by the most exhaustive and largest exhibition of resources yet made for California in the State, including not only the precious metals and those which are destined for the furnace, the forge and the anvil and for structural purposes, there is shown for the first time at the State Exposition a collection of precious stones and gems mined and washed from California soil, an exhibit at once a surprise to the mass of the people and a striking feature of the fair.

But over and above these exhibits of productiveness of the great valleys, the foothills, and the coast and mountains there are others semi-related to agriculture, as for instance the largest exhibit of fine-bred poultry ever made in the State; an exhibition of the progress made in industrial art at the State Polytechnic School at San Luis Obispo; an exposition of advances made at the Federal Plant Introduction Garden at Chico; a remarkably fine exhibition by the University of California in the agricultural, entomological, irrigation, and several other departments, including a fully equipped laboratory, where, day and night, soil analysis is carried on, and in which any soil-owner may, free of charge, have tests of the quality and constituents of his land made and their highest adaptability determined.

But more than this the pavilion exhibition presents the richest and most beautiful examples of finished-in-the-grain California woods ever made at a State Fair. In this day when natural-grain finish is so much in favor, this great showing should command exceeding attention, while for those who deal in timber and lumber, and those who would fathom all the resources of the State, the exhibit is one of great attractiveness.

Let the stranger and inquirer name a desirable citrus or deciduous fruit and it will be shown to him at this fair in its highest development. Let him ask for any manner of desirable vegetable growth and its representative will be produced by some exhibitor. Let him ask for any leading staple of growth from tobacco to cotton and from the cereals to their form in flour and meals, and they will be pointed out in the pavilion. Let him ask for samples of vineyard and olive, and both in ripened and green fruits, in grapes, wines, cured fruits and cordials, in oils of earth, or fruit in those forms of appetizing preparation which are parts of the art of the housewife, and he will find them in the pavilion.

Add to all this that there is the largest and best and most exhaustive showing of poultry; a finely representative exhibition of several of the craft arts, numerous examples of large industry, such as ostrich-plume culture, wagon- and carriage-making, rug and carpet manufacture, construction of incubators, products of canneries and factories, work in wood, leather, straw, iron, etc., and that there is with it all a fair showing of the mineral waters of the State, for which it is distinctively famous, and one has suggestion of what the State Fair is as shown in the pavilion.

But the details here indulged in by no means exhaust notice of the pavilion exhibits. There are elegant carriages, harness, rugs, embroidery, basket work,

examples of Indian ingenuity, beautiful boats and other exhibits, but these are minor considerations in the face of the great productive exhibition by so many counties of the State. There is entertainment also in the pavilion by night in the form of the potter's curious wheel, the music by the band and singing of choirs, and in the social communion of great crowds of people.

And in machinery hall there awaits a treat for those interested in mechanical devices. Here are to be seen all of the implements used by the California farmer while preparing, seeding and tending his crops and harvesting them, and they are the latest to be had. Here every night is the threshing machine used by the farmers of the Mississippi Valley, and which, it is thought, the California farmer must utilize. Here, too, are to be seen the newest things in the line of pumps throwing great streams of water, and in the yard outside is the ostrich herd from the Santa Clara Valley.

The attendance at the fair was not proportionate to its merits. This we attribute to several causes: In the first place the people would not believe, in spite of claims to the contrary, that the fair was going to be any improvement on recent years, and unless it was they did not particularly care to see it. Then again, a short time before the opening of the fair the Directors took rigid action against the much-complained-of gambling and drinking evil, by resolving that no book-making or pool-selling should be permitted, and that no intoxicating beverages should be sold, on the State Fair grounds, and to guard against the possibility of any parties setting up business in these lines near the gates for the purpose of catering to State Fair visitors, the Directors further ordered all side entrances to the grounds closed and prohibited the issuance of return tickets to patrons.

As the revenue from these prohibited features had supported the running races, and as it was then too late to obtain revenue for running races from other sources, the runners had to be cut out. This action antagonized a certain element and they and their sympathizers started the word that without running races the fair would be a failure—that cutting out the chance to gamble and the chance to drink had killed the fair. Unfortunately a great many people had come to believe that these features at State Fairs were essential to success, and there is no doubt that the attendance was affected accordingly. The fair run several days before the people right here in the City of Sacramento awoke to the fact that it was worth seeing, but as the report of its merits spread abroad the attendance rapidly increased, and at the close it was found that the revenue from all sources was sufficient to meet all demands against the Society at that date, and, to put the institution in better standing with is creditors, it was resolved to pay all premiums and accrued bills at once, though to do so would leave only about $1,000 for current expenses until another year. This situation was fully explained to your honorable predecessor, Governor Pardee, and he consented to the use of $2,036.50 of what has been known as the State Fair Construction Fund, then remaining in his hands, to help out the

current expense fund until more revenue might be obtained from other sources. In the meantime we have rented portions of the pavilion for storage and for a skating rink, and have increased our usual winter stall rental at the park by letting barns for housing a dog and pony show, and other barns for show and sale stables to Crouch & Son, of Illinois, breeders and importers of fine horses, and to W. M. Carruthers, of North Yakima, Washington, breeders of Shorthorn cattle. From these sources we are realizing a little more than $200 a month, and this revenue will further help the current expense fund.

From all these sources combined, however, there will not be revenue enough to meet all demands until after the next State Fair, and unless helped by the Legislature in the meantime, the Directors will be compelled to draw on their credit or forego the payment of salaries and other current expenses for a few months.

At this time, however, it can be said with much satisfaction that the Society is out of debt. This is a condition it has seldom enjoyed in the past, but with proper encouragement, which it is hoped to merit, it is a condition which the management will strive to maintain.

At this time the prospects for a successful fair this coming fall are better than they have been at the same season for many years. This we attribute to a persistent campaign which has been carried on ever since the last fair to work up interest in the next one; and we are encouraged to believe that with continued hard work intelligently directed along the lines we are now pursuing, backed by due encouragement from the State, the Agricultural Society of California can be made to rank with the biggest and best of similar institutions in the older states. California has the resources, and once started in the right groove there is no reason why an institution organized and designed to exploit them should not gain in strength with the passing years, and become a powerful instrumentality for the advancement of all industrial interests and the upbuilding of the State.

Very respectfully,

B. F. RUSH, President.

ATTEST:

J. A. FILCHER, Secretary.

FINANCIAL STATEMENT.

APRIL 1, 1906, TO JANUARY 31, 1907.

SUMMARY.

RECEIPTS.

1906.			
Apr. 1—Cash balance	$2,011 04		
Park and Pavilion receipts	7,364 35		
Construction	8,504 05		
Races	4,030 00		
Entrance due collected	253 00		
James Whitaker, special treasurer	3,360 00		
Premiums	15,976 52		
Rent	1,412 00		
Fixed events	2,675 00		
American Shorthorn Breeders' Association	775 00		
			$46,360 96

DISBURSEMENTS.

Expense	$12,758 69		
Races	10,640 00		
Salaries	4,150 00		
Payrolls	4,465 50		
Advertising	857 30		
Entrance due	125 00		
James Whitaker, special treasurer	3,975 00		
Premiums	7,598 36		
Interest	110 00		
American Shorthorn Breeders' Association	1,102 00		
1907.			
Feb. 1—Cash balance	579 11		
			$46,360 86

THE OPPORTUNITIES FOR HOMES IN THE SACRAMENTO VALLEY.

By O. H. MILLER.

The Sacramento Valley is preëminently a home land. In distributing her many blessings the Power that placed the seas, mountains, valleys, plains, and rivers, must have worked with most bountiful desire when it came to the Sacramento Valley, for the combination of soil, water, and climate which this great interior valley of California possesses, is designed to make this a favored land for those who love the happy, prosperous, and comfortable home. An equable climate and fertile soil have here joined hands, and now the Sacramento Valley invites the home-seeker of all regions, and offers advantages which are distinctly its own and which can not be found in any other country under the sun.

The climate of the Sacramento Valley is the same as that which has made California famous. There are no hurricanes, blizzards, or cyclones. The summers are rainless, giving a long period of harvest which is seldom, if ever, marred by rains to injure crops.

The summers are not too warm to be a drawback, cases of sunstroke being so scarce as to be almost unknown. The rainless summer is a decided advantage in many ways, not least among which is the fact that the atmosphere is dry and which tempers the apparent high degrees of temperature and renders this section comfortable, while other and more unfortunate communities are suffering from the heat. Then, again, the nights are almost always cool and inviting, rendering sleep and rest pleasant and refreshing.

The average rainfall of the Sacramento Valley is about twenty-three inches, while on the watersheds in the mountains it is much greater, in some cases as much as from forty to sixty inches falling annually. The precipitation is sufficient for all crops, and the mountains furnish enough water which could be used for irrigation to cover the floor area of the valley nine feet deep without interfering with the navigable streams. This immense amount of water which could be used for irrigation purposes presents a problem which is attracting the attention of the officials of the United States Government, with the result that but a short time ago the Secretary of the Interior set aside from the reclamation fund the sum of $650,000 for the construction at Orland, Glenn County, of a large irrigation project that will place about 15,000 acres of land under water. Under this system the Federal Government will advance the cost of building the system, supervise the work, and the actual cost of the building of the project will be returned to the Government by the landowners, in ten annual installments, without interest.

This means that the landowners are to pay only the exact cost of the system, and at the completion of the ten years' contract, the entire system, together with all water rights and other property that shall have accrued, will become the sole and exclusive property of the people.

The plan which will be carried out at no distant date is to erect in various places in the mountains bordering the valley, immense reservoirs capable of gathering great quantities of the flood waters of the winter season, and in the summer time the stored water will be turned into the canals and carried to the fertile lands of the valley and used for irrigation purposes. The Sacramento Valley contains in the neighborhood of 2,500,000 acres of rich land, and the time will soon be at hand when every particle of this empire will be under the most extensive and complete system of irrigation that the world has ever seen.

The Sacramento Valley offers such exceptional advantages for irrigation that the system at Orland will be built so other systems may be added to it, with the avowed purpose in mind of eventually irrigating the entire valley.

Besides the Government schemes, there are numerous private enterprises which are supplying water to thousands of acres of rich lands. This season will see in the vicinity of 400,000 acres under irrigation. This area is in itself larger than some states of the Union, but in a principality such as the Sacramento Valley it is but a step in the right direction.

Aside from the water and climatic advantages of this valley, there is a potent factor in its development in the character of its soil. It is not a matter of theory, but of record, that the soil of the Sacramento Valley will produce a greater variety of products and of a better quality than any other section of the country. In the Capitol Park at Sacramento may be seen three hundred and fifty different varieties of trees—natives of every country upon the face of the globe—all growing together and flourishing as if they were at home. This is the finest capitol park in the United States and is the wonder of all visitors who are acquainted with the many varieties of trees that are to be found from the tropics to the poles.

Besides all kinds of trees, almost every vegetable and berry known to civilization does well in the Sacramento Valley, and the opportunities for the small farmer to raise a variety of crops are nowhere so favorable as they are here. The large grain ranches are being subdivided and placed upon the market in small tracts suitable for intensive farming, and the prices are not such as to scare anybody away. Many of these lands are under irrigation and can be purchased at from $50 to $125 per acre when unimproved, while places having improvements may be had all the way from $60 per acre up according to the class of improvements.

Among the industries which now present themselves for the consideration of the prospective home-seeker, and from which not only a good living can be made, but which would at the same time give the proprietor a bank account, are dairying, chicken-raising, fruit-growing (of all kinds), truck-farming, berry-raising, and many others about which information can be furnished upon application.

There are building at the present time through the Sacramento Valley a number of railroads, both steam and electric, which pass

through some of the most fertile farming lands and connect with the largest cities and towns of the valley. The Southern Pacific Company has its main line to Portland extending the entire length of the valley and on both sides of the Sacramento River. In fact, the lines which are now in course of construction, when completed, will give to this region passenger and freight accommodations equal to the best.

When one stops to consider the climate, soil, and other advantages of the Sacramento Valley, he can not help find here the ideal land for his home. It is a good place to live; the earning power of the soil is greater here than in any other section of the country, and taking it all in all the Sacramento Valley challenges the world to an open, honest, and liberal competition, and the offer is open to all comers.

OPPORTUNITIES FOR HOMES IN THE SAN JOAQUIN VALLEY.

By WILLIAM ROBERTSON.

California, the land of gold, the land of sunshine, the land whose favored furrows produce more abundantly than those of any other State, has within its borders a series of valleys all of which are marvelously wonderful, each having its distinctive greatness, and out of all these variations of climate and production forming the splendid aggregation which places it in the position of greatest among the family of Uncle Sam.

Among the valleys that of San Joaquin is probably the grandest and most varied in its range of product and climate, as well as grandeur of scenery. In depicting the wonders of this famous valley, the most conservative statement one can make is almost incredible to the Eastern farmer, who can not understand why a man in California can make more out of forty acres of land than he can out of two hundred and forty there, and with infinitely less trouble and expense.

For many years this valley was in the hands of comparatively few holders, and in its arid condition was considered to be of little value, but gradually a change came "o'er the spirit of the dream," and with the utilization of the babbling brooks and stately rivers, by spreading their refreshing waters over the parched land, there arose a new era of wondrous prosperity, a revelation of prodigality of production, that astonished the world; and with the inauguration of railroad service, and the perfecting of transportation conditions, came the opening of new markets that have kept pace in their demand with the rapid development of our farming conditions. Change is a fixed law of nature, and nowhere on earth is it more apparent than in the San Joaquin Valley, and throughout its 250 miles of length the hand of man and the sap of water are constantly changing it from a desert waste to a veritable Garden of Eden.

When reading many of the advertising puffs by real estate men and others, one frequently finds the phrase "Land of Opportunity." Sometimes it is a truthful statement, sometimes a figment of the imagination, but without dissimilation and without fear of contradiction we can truthfully state that the San Joaquin Valley is California's greatest agricultural center, and offers the grandest of opportunities to the rancher, especially to the hard-working, persevering man with moderate capital. One finds in many parts of California, magnificent homes and beautiful ranches maintained as show places by millionaires, who are anxious to leave the severe winters of the East for the clear skies, the balmy breezes, and the beautiful flowers of this sun-kissed land; but

the man of moderate means, who has to work for a living, and who depends upon the profitable investment of his small capital, will reap a richer reward by settling in the San Joaquin Valley, and putting in a year or two of strenuous effort. By this I mean not overwork, but steady, earnest, industrious application; if he looks after the soil, the soil will look after him in the abundance of its productivity.

We have hundreds of instances in this valley, where, only a very few years ago, men began with little and are now well off, and all they possess was taken out of the land they till, and not only that, but out of comparatively small holdings.

Every county in the San Joaquin Valley has some special branch in which it excels, and no matter what line of farming one wants to engage in, from truck-farming to raisin-making, he can find conditions here that can not be duplicated elsewhere. Here, then, is a home man's opportunity, or opportunity for the man who desires a home, and throughout the whole valley development, enterprise and prosperity are to be seen on every hand. As a striking example of what that means, let me state that in Fresno County alone there are thirteen banks with deposits amounting to $8,500,000. That money is not the property of the rich investor, but of the average ten-, twenty-, forty- and sixty-acre man.

In an article necessarily limited in extent it would be impossible as well as invidious to speak of any particular district, but we would impress upon every intending settler the all-important fact that nowhere under the blue canopy of heaven does the industrious home-seeker find such varied conditions so universally prosperous as exist in this great San Joaquin Valley.

Chambers of commerce exist in each of the eight counties the valley contains. Bureaus of information, honestly and intelligently conducted for the purpose of disseminating reliable information to inquirers, and I would recommend all who are interested, and who desire to learn the truth in a conservative way, to make inquiry of these bodies.

OPPORTUNITIES FOR HOMES IN SOUTHERN CALIFORNIA.

By FRANK WIGGINS.

I take it for granted that I am not to write for the rich and the well-to-do, whose coming to Southern California carries with it no increased risk or responsibility, but on the contrary a substantial increase in the delights of living, and with whom home is a mere matter of choice.

We have a very large and constantly increasing number of home-seekers of comparative leisure, persons with plenty of money, who seek channels of occupation for their capital in the section where they find so much enjoyment. While the opportunities for these are large, I would rather they were larger; but such things adjust themselves, and the awakening of manufactures bids fair to provide the necessary openings. Real estate continues as brisk as ever, and a large amount of capital is kept busily employed.

But what are the opportunities of the home-seeker and wage-earner? How may he better himself by coming to Southern California? May he safely make the change from his Eastern home?

No matter what the conditions are, or where the place may be, the rules of common sense must apply. Trite though it may be, the inevitable warning against false impressions must be sounded.

Risks and responsibilities must be assumed in Southern California as elsewhere. The idle and the dissolute can not better themselves by coming here. Those who come in search of health, expecting to get light employment, must take into consideration the fact that there are thousands here like them. Because of the very fact that Southern California possesses many attractions, the people pour in by thousands and tens of thousands—twenty thousand a year. The great majority of these must have work. The great majority of them get it.

Having sounded the note of warning, and assuming that those who wish to come here are able and willing to work, and that they are self-supporting, surely there is no other spot in the wide world possessing so many attractions.

First of all, there is the climate. Say what you will, here is the magnet. Southern California is not merely a winter resort. Nowhere in the country is there a better summer climate than that of the Southern California coast. The heat is rarely excessive, and the absence of humidity makes 95° here more endurable than 75° in the East. The nights are always comfortable.

It is scarcely necessary to extol the winter climate. It has spoken eloquently and compellingly for years. No frost, no snow, no chilblains.

The coming of so many thousands to Los Angeles has in itself vastly increased many businesses and occupations. A city that has constructed a million dollars' worth of buildings every month for the last four years, gives occupation to many trade-workers; and there must be stores and shops to supply their needs. We are building—or rather the

Government is building it for us—a $3,000,000 harbor at San Pedro; we have a new transcontinental railroad, the Salt Lake; the larger part of the enormously rich new gold fields of Nevada are tributary to Los Angeles; the Huntington system of electric railways is a network covering a dozen large towns and two counties; E. H. Harriman is to spend $6,000,000 in improving the Los Angeles-Pacific electric system; and H. E. Huntington equally as much on his interests. All these and many other things make opportunities for homes in Southern California.

The nature of these improvements is such as to call for more manufactures, and the awakening in this direction has been marked. Still, it has been largely along the lines of necessity, and there are virgin fields yet uncultivated which promise much. We have a favorable climate and cheap fuel.

The orange groves still blossom in Southern California; every year we ship from 25,000 to 30,000 carloads of the golden fruit. But the day is long since past when people came to California, planted or bought an orange grove and sat lazily down to snuff the fragrance and pocket the profit dollars from the crops. Orange-growing is hard, scientific work.

Nevertheless, the open-air opportunities in Southern California are very large. Those who understand poultry-raising and can make it a success, may do very well here. Prices are high for poultry and poultry products, of which we import an enormous quantity. Alfalfa-raising is profitable. Walnut-growing, celery-growing, and truck-farming have made money for many, and these are but a few of the channels of outdoor occupation that are open to those who seek wisely for them.

I honestly believe that nowhere else in the United States is it so easily possible for persons in very moderate circumstances to own their own homes as in Southern California, particularly in and around Los Angeles.

The workingman may, if he chooses, buy a lot within fifteen or twenty minutes' ride, for a dollar down and a dollar a week. He can get a first-class, moderate-price lot for $50 down and $10 a month. On the back end of his lot he can put up a tent or a cheap board house, and live in it until he can afford to build a cottage on the front end. The mild climate permits him to do this. Thousands of workingmen have built modest homes after this fashion, rather than continue to pay rent. It may be humble, but it is their own.

In Los Angeles, with those willing and able to work, there is plenty of employment at good wages. This city has been singularly free from labor disturbances, much to the comfort and profit of both employers and the employed.

Drawbacks? They are such as encountered everywhere. Human nature is much the same here as everywhere, albeit the climate has its soothing effects and its uplifting inspirations which can not be had elsewhere.

The transient may have an occasional grouch; and when he does he usually airs himself in the newspapers; but I firmly believe that no person who has lived a year in Southern California would be contented elsewhere.

In conclusion, the opportunities for homes in Southern California are even greater than in past years. The conditions have changed, and the opportunities have to some extent changed with them; but only for the better.

THE BAY COUNTIES OF CALIFORNIA.

By GEORGE M. FRANCIS.

To Central California, that prominent part of our Golden State which pays cheerful tribute to San Francisco as the metropolis of the Pacific Coast, home-seekers have been coming in greater number the past two years than in any previous corresponding length of time. This is largely due to the introduction of new and modernly equipped transportation lines, covering the interurban idea of quick communication and cheap travel. The earthquake and fire of April 18, 1906, worked destruction to millions of dollars' worth of property and brought desolation to many homes. But this greatest disaster of modern times was not to effect a lasting ruin, nor to quench the spirit of the brave men and women temporarily overwhelmed by it. Promotion work along the many industrial lines previously pursued ceased only long enough to secure the readjustment necessary to fit new and harder conditions. State building was taken up in May where it was dropped in April and is now going forward at a pace never surpassed in the progressive history of our commonwealth.

The counties to be taken note of in this article are known as "The Bay Counties"—counties which touch at one point or another the waters of San Francisco and San Pablo bays. They include Alameda, immediately opposite San Francisco; Contra Costa, adjoining Alameda on the north; Solano, whose port faces Mare Island Navy Yard and whose territory extends into the early fruit belt of the Sacramento Valley; Marin, directly north of San Francisco, with a magnificent water front extending from the Golden Gate around to the navigable waters of Petaluma Creek; Sonoma, whose area covers 1,540 square miles; and last, but by no means least in size or importance, Napa.

That the counties above named should attract settlers—from whatever clime they come—is not surprising to those possessing an accurate knowledge of the natural advantages. Each boasts an equable climate and an annual rainfall that insures bounteous crops of almost limitless variety without the artificial irrigation so necessary in most portions of the State.

In Alameda County there are thriving cities and rich fruit-growing valleys. Its chief towns are Oakland, with an estimated population of 200,000; Berkeley, a seat of learning and home of the California State University, numbering some 22,000 inhabitants; and Alameda, a beautiful town in which some 18,000 people reside. These three places are near enough together to be united under one municipal government if by their votes they saw fit to so elect, and they form a pretty picture from the deck of any of the many ferry steamers that ply hourly between the peninsula on which San Francisco stands and the several systems of wharves they maintain.

In Contra Costa, the county adjoining Alameda on the north, Nature reared Mount Diablo, whose summit pierces the clouds 3,860 feet above sea level and whose meridian marks the geographical north and south line in countless documents filed for record in the archives of State. Contra Costa County is spoken of as the second manufacturing county of the State, San Francisco alone surpassing it in this particular. The largest smelter and refinery for precious metal in the world is within her borders, likewise powder works, oil works, brick-making plants, fruit canneries, furniture factories, etc. The Southern Pacific and Santa Fé, both overland systems, serve the people of that section with inland transportation, and at Port Costa and other wharves deep-water vessels take on and discharge rich cargoes.

Solano County has in her principal city, Vallejo, a lively port—the starting point of the Vallejo, Benicia and Napa Valley Interurban Electric Road, which has been in operation now over a year and does an immense business in connection with the steamship line belonging to it. A great flouring-mill, capable of producing 2,500 barrels of flour per day, is a Vallejo institution, and fish- and fruit-packing establishments, iron works, and the famed Vaca Valley, where the earliest fruits of the season mature, are to be numbered among Solano County's most valuable assets.

Marin is a county of cozy retreats and delightful health resorts, and in her chief town, San Rafael, one of the finest hotels in the State is maintained. Above San Rafael rugged old Mount Tamalpais rises skyward, and to its top probably the crookedest railroad ever built by man runs to carry in airy steam cars the thousands who go to the summit for the view that altitude affords. The Marin Terminal has a road on the outskirts of San Rafael which is partially completed, and work will soon begin on the Bay Counties projected road from Richardson's Bay to Napa and Lake counties. Report says the road recently purchased 1,000 acres of marsh land fronting on Richardson's Bay, costing over $100,000, for shops. The Southern Pacific runs fast trains from Tiburon Point, on San Francisco Bay, through Marin to the City of Napa and on to Calistoga, the head of Napa Valley.

Sonoma County is great as a grower of cereals, fruits, berries, and hops. Her capital, Santa Rosa, is one of the most prosperous cities in the interior—made so by liberal-minded and public-spirited citizens, who refused to be conquered by the catastrophe which so terrorized that community and made trouble for San Francisco in April of last year. Petaluma, one of the oldest towns in Sonoma, is the center of a great poultry-raising district, which seems to keep everybody in ready money and to a great extent does away with the credit system so common in most communities. At the head of Sonoma Valley, in the pretty town of Cloverdale, citrus fairs are yearly held by way of demonstrating the success of lemon- and orange-growing begun in that locality several years ago and from that time to this carried on extensively. And let it not be forgotten that Sonoma County is the home of Luther Burbank, the originator of new varieties of fruits and flowers, a distinguished and withal a very modest gentleman who has more calls from more noted people than any other man—official or private citizen—in this part of the State.

Napa County—a charming combination of tree-covered mountains and fertile valleys—touches the northern point of San Pablo Bay just

above Mare Island. Through its main valley runs Napa River, a navigable stream for ocean craft as far up as the City of Napa, and within its boundaries are as thrifty and fruitful vineyards, orchards, grain and stock farms as the most exacting agriculturist could ask for. Napa, the county's shire town, has within the last decade become a busy manufacturing center and is as much noted for her leather in the Eastern States where her "Napa-Tan"—her gloves and shoes—find preference, as the county in general is celebrated as a producer of fine fruits, especially stone fruits—cherries, peaches, and prunes. The extending of a new steam road into Napa the past year and the building through it of an electric car line have put Napa in speedier and cheaper communication with the outside world and accelerated greatly her growth. She now enjoys the advantages of a daily boat service to San Francisco and the full operation of one electric and two steam car lines. All of which means a cheaper freight and passenger rate made by competition than could possibly be secured by a State-made railroad commission. Napa has several large fruit packing and drying plants. To these a cannery—the largest in the State—is to be added the present season. A company has just incorporated with a paid-up capital of $100,000 and bought the land along the riverside on which to build it. Since the last Federal census there has been a gain of some two thousand people in the City of Napa and a multiplication of business enterprises that employ at remunerative wages all the skilled and unskilled labor that offers. Napa has her full quota of schools and churches and those institutions which develop the right sort of manhood. It was years ago predicted that in good time Napa Valley would become one of the suburbs of San Francisco. That good time has arrived. With trains and boats departing and arriving at all hours of the day and into the night, business people in the metropolis can have their homes here and spend little time and money on the road going back and forth. Here the skies are as sunny, the air as balmy, the people as happy, as in the most favored sections of the universe, and dwellers here cordially invite honest and industrious immigrants looking for homes to share with them their goodly heritage.

OPPORTUNITIES FOR HOMES IN SIERRA FOOTHILLS.

By J. H. LINDSEY.

Every newcomer to California, who arrives here with the intention of making a home for himself, is naturally interested in location and climatic condition, and it is worth the while of all such intending settlers to investigate the advantages of the Sierra foothills. They are among the most fertile regions of California. This, of course, is due to the richness of their soil and the mild, even climate they enjoy. This region has the most varied climate of any other section in the State, and surpasses in all points of desirability. The foothills extend from the valley proper to an altitude of almost 2,000 feet, and the territory between these points has an abundance of area where ideal and beautiful homes may be established, either for summer residence or for permanent abodes.

These gradually rising hills are already dotted with hundreds of prosperous farms and orchards, whose owners not only enjoy an ideal climate, but gain a profitable sustenance as well from fruits and agriculture.

It is here that the voice of opportunity calls to the man with small means. Here he can establish himself on a five- or ten-acre farm and make a good living for his family by poultry-raising and the growing of small fruits. Berries, for instance, have become a rising industry in the foothills, for which there is a constant and profitable market. From Newcastle, the principal foothill shipping point for fruits, the average daily shipments of berries during the season amount to 2,000 cases, and proportionate quantities from the other points. Then there are all the other varieties of fruit for which the foothill region is noted, and a never lagging demand for all that can be raised, which the fruit houses buy for cash.

There are also opportunities for the newcomer who desires to follow mining, as prospecting along the streams and cañons is still profitable, and affords a means of livelihood for many citizens.

During the fruit seasons there is a great demand for labor in the orchards, shipping houses, and canneries, so that the opportunities of the wage-earner are alike bright with the farmer and the fruit-raiser.

So popular have the foothills become as summer and health resorts that many farmers engage in entertaining tourists, and have built up and enlarged their homes into charming summer retreats. These in many instances have become well known and patronized by travelers who avoid the crowded resorts.

Great, indeed, is a region which offers the opportunities in the two cardinal industries of the State—mining and fruit-raising—such as are to be found in the picturesque foothills.

The largest shipping center in the Sierra foothills, and for deciduous fruits, in the State, is Newcastle, five miles below Auburn, the county seat of Placer County. Here are congregated no less than nine large fruit houses, all engaged in shipping carloads of green fruit to the markets of the United States, Mexico, Canada, and Great Britain. These houses are also doing a large business in small fruits throughout the mining sections of neighboring states. The average number of cars shipped from Newcastle alone during the season is about 1,400, each car being loaded with twelve tons of fruit.

Good fruit land can be had in any sized tracts in this region at from $25 to $100 per acre, according to the distance from the nearest shipping point. Bearing orchards bring from $150 to $500 per acre, according to the nature of the improvements.

Picturesque scenery abounds throughout the hills, and the many panoramas of Nature's wonders have made the Sierra foothills famous with travelers and tourists.

Transportation has given Newcastle as a shipping point and Placer as a county their prominence and wealth in the fruit world, but the region from Bakersfield to Shasta, an empire in extent, has practically the same conditions, and with better transportation, which is near at hand by the electric roads being built and projected and considered, this foothill empire will be the scene of the most desirable homes, by reason of climatic and scenic conditions, on the American continent.

HUMBOLDT AND THE NORTHWEST COUNTIES.

(SUPPLIED BY HUMBOLDT CHAMBER OF COMMERCE.)

For those seeking new locations, new homes, the counties on the northern coast of California present exceptional advantages and attractions. This region is endowed with crude resources, which, for wealth, magnitude, and variety are surpassed by no section of the Pacific Coast; the climatic conditions, as recorded by the Government weather reports, show a climate as even and perfect as can be found; and by reason of position, the opportunities have never been exploited as have most other sections, thus leaving it a fresh field for the home-seeker, inviting and full of opportunity, and presenting an opening to almost every calling and condition of life.

First, to take a general view of Humboldt County, which is central to this rich region, and that portion of contiguous territory which is by nature immediately tributary to Humboldt Bay and harbor, we have an area which embraces all of Humboldt and Del Norte counties, a greater portion of Trinity County, a section of Siskiyou County, and a large portion of Mendocino County. This territory extends fully 150 miles along the Pacific Ocean, and from 40 to 80 miles inland.

This portion of California embraces within its outlines the heart and bulk of the unparalleled belt of redwood timber, in area about 700,000 acres, also numerous other varieties of wood, well adapted to manifold uses; it has an undeveloped petroleum field of 1,500 square miles in extent, from which the purest crude oil known is taken; it possesses untold copper deposits, some locations of which have been sufficiently developed to demonstrate beyond the possibility of a doubt that they will soon become rich producers of copper; gold, both in quartz and in placers, is to be found all along the eastern boundary, and offers a great field for both capital and labor, and this field is now attracting the attention of a large number of practical business men who are also practical miners. This mineral belt extends from the Oregon line southward fully 150 miles, and throughout the whole area is distributed in abundance timber, wood, water, and water-power, natural auxiliaries to mining development. In lesser degree of importance may be mentioned the existence of coal, iron, chrome, asbestos, mineral paint, kaolin, lime, shale, and clay.

With such an array of resources, the possibility for business, manufactures, and industrial expansion are almost illimitable.

Embracing a portion of this mineral section, and also covering the contiguous territory inside the forest belt, is a large area of country where all the tree fruits of the temperate zone grow to their greatest perfection—and yet at present it is used largely for grazing purposes, cattle and sheep being the interests mainly occupying the ranges. With the present lack of transportation such occupation is the practical one,

but with the coming of several lines of railroad that are now promised, and which promises seem to have tangible foundation, conditions will change and this land converted to the more profitable use of producing fruits and nuts.

On the coast side of the timber belt is the dairying and farming section, the best and most extensive in the State. The cool, moist climatic conditions along the coast are especially favorable to dairying, and this interest is second only to the great lumbering industry. In 1905 the dairy products of Humboldt alone reached a total value of $1,335,850, exceeding all other farm and orchard products combined. In some of the more sheltered sections of this coast country, back next to the timber and foothills, apples and most of the tree fruits do well, and the whole of this section is particularly adapted to the berry fruits, a fact that has been demonstrated, since these berries, either for the table or for canning, challenge the world.

In direct connection with these possibilities must be taken into consideration the splendid distribution of water-power in five considerable rivers that traverse this portion of California—the Klamath, Trinity, Mad, Eel, and Mattole rivers, all of which furnish power that can be readily applied direct or converted into electric energy. The first named stream, the Klamath, is a large river having a flow of 500,000 cubic feet a minute, and it is safe to say that for a distance of 150 miles, duplicates or multiplies its power every 10 miles of that distance.

The lumbering interest at present is by far the leading industry of this region. It is estimated that for the year 1906 the output of Humboldt County alone, when summed up, will reach 350,000,000 feet of sawed lumber, which, at $18 a thousand, gives an income to one county from this single industry of $6,300,000, and all indications point to the fact that this figure will be increased the present year.

The profitable industries that have been and may be founded on the many resources which this section possesses, may readily be conceived by the practical mind, and the power available to operate them, industrial activity and expansion need be limited only by the volume of demand.

With the conditions above enumerated there are two other factors necessary to make up an ideal situation—health conditions and facility of transportation.

Taking up the health conditions, let us refer to the United States weather report regarding temperature. For a series of years for the three winter months, December, January, and February, we have as the lowest average for 1899, 30°; 1900, 35°; 1901, 32°; 1902, 34°; 1903, 33°; 1904, 31°. On the other hand, the highest average winter temperature for the same years was, in 1899, 59°; 1900, 65°; 1901, 65°; 1902, 68°; 1903, 65°; 1904, 68°; or a general average of highest temperature for the winter months during the five years of 62°. During these six years the range of winter temperature, from highest to lowest, was 27°. The average given by the Government reports by months for thirteen years is as follows: January, 46.4°; February, 46.4°; March, 48.2°; April, 49.5°; May, 52.3°; June, 54.7°; July, 55.6°; August, 56.4; September, 55.4°; October, 53.3°; November, 50.8°; December, 47.8°; making a yearly average of 51.4°. The annual rainfall is about 45 inches.

This even temperature comes as a powerful aid and supplement to other conditions which stand preëminent for their health-giving and corrective properties. The temperature of the coast is cool, bracing, and invigorating, giving life, strength and vigorous health to hundreds of persons afflicted with bilious complaints or malarial fever.

But every one does not require the same climatic conditions. There are those who labor under pulmonary weaknesses, and are not able to stand the bracing, invigorating coast atmosphere and sea-breezes, and for such nature has designed a most perfect sanitarium among the hills inside the timber belt which extends through the country, occupying a strip of territory parallel with the coast from 5 to 20 miles wide. This forest is balsam laden, through which the strong ozone sea-breezes drift and filter, till upon reaching the open country beyond they have become tempered, softened, medicated to a degree that brings with them a grateful, healing balm to weak lungs and bronchial tubes. In this interior section, however, there is more cold in winter, and greater heat in summer than on the coast.

The development of this magnificent territory of natural wealth has been aided by the cheapest transportation that commerce knows—deep water. In the earlier stages of the settlement of the country, when industrial development clustered mainly around Humboldt Bay, this water transportation afforded an admirable avenue for the growing commerce in the chief product—lumber. But as the community broadened, and its business requirements enlarged, local railroads have been constructed and put into operation to the extent of a mileage which now reaches from 150 to 175 miles, all serving as feeders to the commerce of Humboldt Bay, the largest and most central shipping point of the Northern California coast. For several years, however, the need of direct connection with the railroad systems of the country has been growing more and more acute, and the plainly apparent traffic which such a railroad would receive, has attracted the attention, cupidity, or ambition of a number of railroad interests. The prize that lays in this traffic is such that the several projects that are now on foot are not at all likely to abate until railroad connection with this rich region is an accomplished fact. Preliminary work is being prosecuted in three directions from Humboldt Bay—south, east, and north—and in a short time we are promised connection with the outside world in different directions. The projected lines north and south are each working from established railroad points toward Humboldt Bay. The projected line eastward commences at Humboldt Bay and works eastward, and probably 20 to 40 miles of this line will be in operation before the close of the present year. Each one of these roads, leading to the three points of the compass and centering at Eureka, traverse virgin country filled with varied resources which now lie dormant. The advent of the railroad in each of these several sections is certain to produce a great activity in all three directions, and this activity will be sustained, for the reason that in each case there are immense and varied resources awaiting the opportunity which better transportation will bring.

With the health conditions such as here detailed, the undeveloped resources at hand, and the movement to make these resources available, there is inviting opportunity for small capital and labor in numberless vocations.

SAN FRANCISCO.

Her Present Situation and Future Prospects.

By ARTHUR R. BRIGGS.

The year 1906 will be memorable in the history of California and of San Francisco. What occurred April 18th and the three days immediately following is not only ineffaceably impressed on the minds and grafted into the experience of those who were witnesses of the destruction wrought, but has become a part of the history of catastrophes over the entire country and throughout the world. It was but natural that many erroneous statements were made soon after the fire, and that early predictions as to the rehabilitation of the city and the ultimate effect of the catastrophe were made without any proper basis of calculation. These opinions and utterances came largely from irresponsible sources, made with assumed knowledge and with earnestness that carried weight not merited. Even at this time, nearly a year after the earthquake and fire, in the face of unmistakable evidence of vigorous growth, almost unparalleled industrial and commercial activity, misstatements in respect to conditions in San Francisco are being published. From the first there was no reason to doubt that the rebuilding of the city would be quickly accomplished. By reason of distance from the base of supplies, lack of established facilities for procuring men and material, and the unsettled financial condition, it took a little time to adjust the needs to the new situation. But the great forces that recognize no obstacle, that press forward the wheels of progress, were behind San Francisco—as they are behind all great commercial cities—and their necessities demanded heroic and untiring action. The State as a whole, the Pacific Coast and the commerce that naturally centers here, gave expression to a demand for the speedy rebuilding of the stricken city. The people declared with one voice, we will rebuild and in a few years make a city greater in extent, more beautiful and more durable than the one which was destroyed.

Within a period of ten months the wheels of commerce, domestic and foreign, have been set in motion with surprising activity. All branches of trade have been adjusted to the new order of things, and are now, despite temporary disadvantages, being conducted as though no fire had occurred. With the finances of the city on a sound basis, every commercial and savings bank unquestionably in strong condition; with the insurance situation fairly well settled, from which two hundred millions of dollars is released and put in use for rehabilitation; with mercantile and manufacturing interests again established, and with a foreign commerce going on as though no interruption had occurred; with the water, light, and sewer systems restored, and the facilities for

transportation throughout the city renewed, there followed naturally the demand for permanent rebuilding and improvement.

The city for a time after the fire presented a unique appearance with its temporary structures situated in the midst of an extensive area of magnificent ruins. The year 1906 closed with a good record of high class business structures, already constructed or under process of construction, scattered here and there on the principal streets on sites that have for years been conspicuous. The record for the nine months since April last is told in the statement that building permits during this period, for permanent structures alone, aggregated $35,000,000. This is being augmented each week at the rate of about $1,500,000. Scores of the most prominent business buildings that withstood the fire are being restored and repairs are nearing completion. Some of these are already occupied. The Merchants' Exchange on California street has already many occupants, and by May of 1907 will be ready for many more. The Kohl Building on California and Montgomery streets is in condition for occupation almost throughout. The Monadnock, the Spreckels, the Flood, and many other buildings are nearing completion, and stand as monuments to the energy of the men who are devoting their money and their zeal to the rebuilding of the city.

A visitor from the city of Baltimore, who is entitled, by his position, to speak on the subject, recently said: "In looking over San Francisco I find no reason for thinking the work of reconstruction is not progressing in a most creditable manner. Where a large district is to be rebuilt, the work of reconstruction can not, to the casual observer, make much impression in a few months. Much preparation had to be made before building began. Most of these preliminaries have now been completed."

What has been done since April last is but a forecast of what may reasonably be expected for the year 1907. This prediction finds substantial support in a late compilation made by Labor Commissioner W. V. Stafford, showing the increase in the number of men in San Francisco engaged in the building trades on January 1, 1907, over the number likewise engaged on January 1, 1906. Summarized it is as follows:

January 1, 1906—All building trades, skilled workmen..	14,466
January 1, 1907—All building trades, skilled workmen..	28,459
A gain of.....	13,993, or 99.14%

Of this number the largest gain was in carpenters, or against 3,067 January 1, 1906, there were 9,802 January 1, 1907, a gain of 6,735, or 219.59 per cent. To this should be added a gain of about 2,000 in special lines of carpenter work, including millmen, etc., identified or affiliated with the union. This record is for unionized labor, the non-union men not being shown in the Commissioner's report. There is also a marked gain in the number of skilled laborers in other branches. On January 1, 1906, the record shows an aggregate of 402 union bricklayers in the city; January 1, 1907, the number was increased to 1,806, a gain of 1,404 or 349.25 per cent. This exhibit of increase in the number of skilled laborers employed in building trades is an indication of what is going on in the way of reconstruction. Rebuilding, when considered as a whole, seems a gigantic undertaking, but when reduced to units, each one doing for himself that which is suited to his means and his needs, the situation is simplified and the future presents a different outlook.

As indicating the activity and volume of business in the city, brief

reference to figures again may be interesting. The bank clearings for the year 1906 aggregated $1,998,400,770. The total clearing for October last is reported as the largest in any single month in the history of the city.

In forecasting the future of San Francisco, two principal factors should be considered, viz: confidence and financial ability. Of the first there is no lack, demonstration of which is found in the progress already made and in the plans projected. Where the money for rebuilding is to come from may very properly be considered. Assuming that the fire destroyed $500,000,000 of property, the sum necessary to replace it must be provided before reconstruction is fully accomplished. What, then, is the source from which this vast sum is to come?

First, is the sum realized from insurance, aggregating in round numbers	$200,000,000 00
Next, the foreign capital that will come here to rebuild buildings, owned abroad, without reference to the money that is coming and will come for new investments (estimated)	25,000,000 00
Total	$225,000,000 00

This leaves an apparent loss to be made good of $275,000,000. Has the State an earning capacity sufficient to supply the deficit, fast enough to meet the requirements in the speedy rebuilding of San Francisco? Let the following exhibit of annual earning capacity of the State answer the question, viz:

Minerals (including petroleum)	$45,000,000 00
Fruits (all descriptions)	35,000,000 00
Dairy products	22,000,000 00
Wine and brandy	15,000,000 00
Cereals	25,000,000 00
Live stock	15,000,000 00
Lumber	25,000,000 00
Beet sugar	4,000,000 00
Vegetables	3,000,000 00
Hops	1,500,000 00
Wool	1,250,000 00
Sundry products not enumerated	33,250,000 00
Total	$225,000,000 00

From this exhibit, which does not count the manufacturing industries and the many unclassified sources, the yearly earnings are nearly, if not quite, equal to the deficit or net loss to the State from the fire of April last. It is therefore reasonable to believe that the money for rebuilding will not be wanting. Money seeks centers of profitable investment, and San Francisco presents rare opportunities. Nor should the fact be lost sight of that the population of the State is continually on the increase, and that larger population means increased earning capacity. The movement of people in search of homes and investment is from the east, westward. The development of the State at large promises to be more rapid in every branch of industry in the years to come than has been experienced in the past, and with development comes constantly increasing growth of the principal city to keep pace with the demands of trade and commerce.

As has been truly said, for individual enterprise, ability and strength, the men of San Francisco stand in the front rank: collectively they lack cohesion in matters of public interest, but in the rebuilding of the city they stand as a unit.

ALMOND-GROWING FOR PROFIT.

By J. P. DARGITZ, of Acampo, Cal.

The fact that I have been able to find so very little on the subject of almond-growing is my excuse for this paper. While I do not pretend to be an expert by any means, yet I will attempt to give you the result of close observation upon my part, hoping that it may be beneficial to those who may read it.

I am surprised that there are so few almond orchards being planted in California. My reason for this surprise is not alone in the market conditions, but in the fact that people are talking about over-production and under-consumption and wondering how we are to harmonize the market conditions with the very large acreage of fruit trees being planted. We do not import very much fruit, but we do import a very large portion of the almonds which we consume. It is safe to say that this country will not in this generation produce enough almonds to meet the demands for home consumption. Such being the case, have we not here a most inviting field for the horticulturist to enter? I will also try to show that it is a most profitable one as well.

There are some things to have and some things to avoid in embarking upon the growing of almonds for profit.

In the first place, one must have a deep rich soil, for the almond is a very voracious feeder. Its root system is one of the finest of any of our orchard trees, and we might note that it should therefore be a most excellent root for nursery grafting. It is one of the longest lived of all orchard trees.

Not only good and deep soil, but perfect under-drainage must be had, for the almond will not bear wet feet any more than will the peach.

Now, if these were the only conditions we might expect to find plenty of room to grow almonds. But we must next choose our location with reference to both frosts and rainfall. As the almond is such an early bloomer this is a very important point. I am of the opinion that California is the only State in the Union where the almond can be successfully grown on account of frost. A location must be chosen where there is no frost to amount to anything after the first of February, as the almond begins to bloom the last of January in much of this State. But even more important than frost is the matter of rainfall; for while the almond likes plenty of moisture it should have sunny weather while it is blooming to insure success. I am quite sure that very many of the failures that are charged up to frost are really due to rain during blooming time which prevents pollenization. Fortunately this tree holds its bloom from two to four weeks, and during that time we may quite reasonably count on a few days of sunshine. Only a few are absolutely necessary, for the almond is a very free bloomer and some varieties are very rich in pollen.

All the other requirements having been met, there remains perhaps the most important of them all yet to be considered, and that is the selection of the proper varieties. I am confident that right here is the rock upon which more growers have wrecked their hopes than all others combined. As a rule all the paper-shells are deficient in pollen and will not bear well, if planted alone. From what I have been able to learn the only two which warrant planting in this section are the Nonpareil and the Ne Plus Ultra. The latter is not a very good nut and needs much more moisture than the other. The Nonpareil will give good results if planted with some other variety as a pollenizer. It is one of the very best of nuts and is well worth planting.

For a pollenizer there is, in my estimation, no better nut than the Texas Prolific. This nut was found by a Mr. Williamson in his travels for the W. R. Strong Nursery Company of Sacramento.

He brought the nut to Mr. Robert Adams, who was in charge of the above company's nurseries east of Acampo, and told him not to be afraid to plant it, for if it bore here as it did where he found it it would beat anything in the almond line. Mr. Adams began planting it eighteen years ago, and for fifteen years it has not failed to fruit, and usually very prolifically. It blooms about two weeks later than the Nonpareil; in fact, is the latest bloomer of all almonds that I have observed and is therefore very desirable on the frost count. It is also the very best pollenizer and when planted row about with the Nonpareil will cause it to set fruit splendidly. We have abundant proof of this in our south orchard, where the profitableness of almond-growing has for several years been a theme for wonder by all who have seen them. The Texas Prolific on S. S. Murphy's lot yielded over $200 per acre in 1906 at the age of ten years. It is a soft-shell but not a paper-shell.

In our north orchard 240 acres of unprofitable I X L almonds were topped and grafted over to Sugar and Giant prunes. The second year there was quite a sprinkling of fruit. The third year they produced enough to pay all expenses of production and netted six per cent on a valuation of $180 per acre. The fourth year they netted twenty per cent on $200 per acre. I mention this to show the marvelously speedy results obtained, due, I am quite sure, to the fine root system of these trees. A few of them were worked over to the Texas Prolific almond and the third year they produced about $1 per tree and the fourth year about $2 per tree. How vastly much better is this than to grub up unprofitable almond trees, providing of course that they are thirfty and healthy.

The Drake Seedling is also a very profitable almond to grow in this section, but I do not think that it will by any means equal the Texas Prolific. For the year 1906 the latter yielded for us just three times what the Drake Seedling did.

As to prices: The Nonpareil at 14 cents per pound, the Drake Seedling at 11 cents per pound, and the Texas Prolific at 10 cents per pound will each bring about $10.50 per standard sack; the I X L at 13 cents per pound about $9.00 per sack, and the Ne Plus Ultra at 12 cents per pound about $8.50 per sack. From this it will be seen that there is no discounting the Texas Prolific because it is not a paper-shell or does not bring so high a price as a paper-shell. And when we remember that it will, on an average, give us twice as many sacks as any other

almond grown, it will be seen why we are partial to the Texas Prolific as a matter of profit in almond-growing.

But what shall we do with our orchards of other varieties which do not pay as well or which do not pay at all? For instance, we have in our north orchard about 100 acres of fine large trees of Nonpareil, Ne Plus Ultra, I X L, and La Prima varieties which did not make expenses of cultivating and cropping for the year 1906. Shall we grub them out and plant peaches or grapes or some other fruit, as some people do? One block of 15 acres was so treated—and this was one of the best producing portions of those varieties, too—but I would not trade even acres of these almond trees which are not producing to-day for that 15 acres planted to grapes one year ago, for it will be five years before anything is received from it above the cost of caring for it, while we shall be able to make the orchard pay for itself entirely before the five years are gone if our conclusions are correct. Note the figures which I gave you where I X L trees were worked over to Texas Prolific. During the year 1906 we worked over about 2,500 large I X L trees to the Texas Prolific, and will endeavor to work all the rest of that variety over to the same during 1907. We expect that these trees scattered among the other varieties will do their work as pollenizers and bring the rest into bearing. We are now cutting about half of the wood out of the trees to be worked over, which will force a large growth of sprouts about the trunk, and then these will be budded next August. This will make a better tree than can be done by grafting where the tree is so large, and will be cheaper and will help to keep the tree vigorous. It will also leave us much bearing wood in them for 1907 and 1908. Then the remainder of the tops will be cut out, and by 1910 we shall look for about $1 worth of the Texas Prolific per tree, with a rapid increase thereafter. This method will give us the transition from one variety to the other with the loss of only one year's chance for a crop. But we shall not stop here, for we shall also water the trees, because water pays when used judiciously in almond-growing.

The question of watering, spraying, and fertilizing, as well as pruning and cultivation, will now play a very important part in the results to be obtained by the orchardist who is to make a profit. Plenty of moisture is necessary in the autumn to form good healthy fruit buds to insure the setting of fruit the following spring. In September of 1904 we had a most unusual rain of about four inches. This was hard on the raisin-growers, but very valuable to the almond-growers. It produced an abundance of good strong fruit buds and we had the promise of a record-breaking crop for 1905; but in July of that year came that awful hot spell which the "oldest inhabitant" had never seen before, and the trees called so heavily upon the soil for moisture that a large proportion of the nuts were blasted and others were made to be "sticktights." This cut down our expectations for the year's revenue, but taught us the necessity of being prepared to water to save the drying up of the crop in such an emergency. This also left us with no moisture in the ground to make fruit buds for the 1906 crop, and still worse we did not get any fall rains that year, in fact not until in January. This greatly interfered with our chances of a crop in 1906, but it also taught us to be prepared to water in August and September to make good fruit buds for the following year. Now, some one may ask why did the Texas

Prolific do so well in 1906 when these other large trees did so poorly, if the rain had so much to do with it? My reply is that the Texas Prolific seems to do better with less water than other varieties, but yet where they were only ten years old they did much better than where they were eighteen years old. It is safe to say that it will pay immensely to water them and all other almond trees after they are ten years old.

Every one should do something in the way of experimenting with any unprofitable almond orchard to see what can be done to better the production. Water, spraying, and fertilizers should be tried and the results carefully noted. It is very probable that spraying has some property of fecundity as well as of destroying insects and fungi.

As to the diseases and pests to which the almond is subject we are on pretty safe ground. The mossy fungus is easily cleaned off by lime and sulphur, while the red spider is easily destroyed by the fumes of sulphur in the heat of summer. As to the black knot it has not been demonstrated to my satisfaction whether it is a disease or the result of disease. Of course no one would pay any more for an orchard known to be infected with black knot than one free from it, but the best parts of our orchards have it and we have yet to study it further before being sure of our ground here. Mr. T. R. Burket, who bought the Foster place a year ago, reports that he found there seven trees of paper-shells which always bore well and which had every appearance of being thrifty and healthy, but because the birds from the river near by did the harvesting for him he decided to take them out. He was much surprised to find black knot on five of the seven and so bad that in some cases a knot had grown over and enfolded two roots. The 15 acres taken up by Mr. J. L. Johnson, and which were reported to be badly affected with the black knot, offer another bit of evidence. He left fifteen trees around his house for shade, and Mr. J. J. Ford, who lived on the place during a part of 1906, reports that he harvested and sold $12.60 worth of nuts from these fifteen trees without any pruning or cultivation whatever. The almond orchard of Mr. Ortman, ex-county assessor, is reported to have been so badly affected with black knot when two years planted that he was about to dig it up, but on the advice of friends left it and it has been a source of great profit for a number of years. The orchard of Mr. Wilhoit, near Woodbridge, was reported by him to have been full of this trouble ever since it was planted, and yet it pays a good income on $500 per acre.

To sum up: Select good, well-drained soil, deep and rich; plant Texas Prolific solid or in alternate rows with Drake Seedling or Nonpareil; prune, cultivate, and spray when necessary; see that your trees have sufficient moisture; in short, give your trees as much care as you would peaches or grapes, and I am quite sure that you will find profit in almond-growing.

RAISINS AND CURRANTS IN 1906.

By GEORGE ROBERTSON.

For the last five years I have made an annual statistical review of the raisin and wine industries, and other products of Fresno County, during the previous year. This year I send a brief summary of the production and consumption of raisins during 1906, compared with former years; and as foreign currants compete to a certain extent with raisins, I have also included the quantity of that fruit imported each year.

The California Raisin Crop.

Year.	Pounds.	Year.	Pounds.
1901	74,000,000	1904	80,000,000
1902	106,000,000	1905	73,000,000
1903	120,000,000	1906	85,000,000

A year ago reports were circulated in the press, and by others, that the stagnation which then prevailed in the raisin market and the falling off in the demand for California raisins, were owing to the large importation of Spanish raisins. This statement was entirely wrong, as I pointed out at the time. The imports of Spanish raisins, instead of being largely in excess of the average, were actually 2,825,928 pounds less than the previous year, and the exports of California raisins, instead of having fallen off, as stated, showed an increase of 3,034,406 pounds over the preceding year.

This last season reports emanated from the same source, endeavoring to explain that the reason why California raisins had risen to a higher price than ever known before was in consequence of the great falling off in the imports of Spanish raisins, and the large exports of California raisins to Europe, owing to the failure of the Spanish crop. This is not the true explanation, as the quantity of the imports and exports is not on a sufficiently large scale to account for such a great rise in the price of raisins as has taken place, as the following figures will prove:

Imports and Exports for Fiscal Year From July 1st to June 30th.

Year.	Foreign Raisins Imported.	California Raisins Exported.	Currants Imported.
1901	3,860,836 lbs.	3,512,164 lbs.	16,049,198 lbs.
1902	6,683,545	2,323,274	36,238,976
1903	6,715,675	4,280,028	33,878,209
1904	6,867,617	4,020,418	38,347,649
1905	4,041,689	7,054,824	31,742,919
1906 (ending Nov. 30th)	4,044,168	7,965,799	31,134,926

Nearly all Government reports and statistics are made up for the fiscal year ending June 30th, and as the complete figures for 1906 will not be published for some months, the above totals for 1906 are taken from the monthly summary of Commerce and Finance, which are for the calendar

year from January 1st to December 31st, and therefore do not quite agree with the above totals for other years. Both sets of figures are here given for the last three years (although only for eleven months of the year), as they are near enough to be useful for comparison.

Imports and Exports for Calendar Year From January 1st to November 30th.

	November		Eleven Months Ending November 30		
	1905.	1906.	1904.	1905.	1906.
Raisins imported.....	5,323,938	1,293,178	3,814,119	10,139,498	4,044,168
California raisins exported	1,024,212	4,138,933	5,942,249	3,462,997	7,965,799
Currants imported	4,024,213	4,351,406	25,214,665	32,592,230	31,134,926

It can be seen at a glance that fewer Spanish raisins have been imported, and more California raisins exported, during last season, especially during the month of November, than in recent years; but the imports of foreign raisins in November only show a decrease of 4,030,760 pounds, and the export of California raisins during the same month an increase of 3,114,721 pounds over the year 1905, currants remaining almost stationary.

A difference of only three or four million pounds in either imports or exports could not have much influence on the price of a crop of upward of 80,000,000 pounds, and does not account for an increase in price of 100 per cent and upward, compared with recent years. The true cause was probably a smaller crop than was first anticipated, a considerable quantity of which was sold early in the season at comparatively low prices. Many who sold short were compelled to buy back at any price to fulfill their contracts. Then, again, there was a better domestic demand for dried fruits of all kinds.

The latter is an encouraging sign, for it is the home market that producers and manufacturers in all countries have to look to for their best customers, as it is invariably the largest, most important, and best paying one, beside which foreign trade can never compare. There should be room, however, for a considerable expansion of the export trade in California raisins, apart from Europe. Canada now imports on an average about 13,000,000 pounds of raisins annually, of which only some 2,000,000 are supplied by California.

THE POULTRY BUSINESS IN CALIFORNIA.

The State Agricultural Society has made some investigation of the chicken industry as conducted in California, and finds that while failures occur, as in all lines of industry, they are less frequent than in most other callings. On the whole, the chicken business in this State is growing and prosperous, and the communities where it is obtaining a foothold find their business being converted from a credit to a cash basis. Less capital is required to begin with in proportion to income than in most other lines of industry, and the returns are surer. Floods or drouths or unseasonable frosts do not materially affect the output. The market is close at hand, the pay is always cash, and the prices are generally satisfactory. Big farmers in California have been disposed to regard it as a little business, but its profits have begun to attract big men and superior talent.

On the question of capital required to start a poultry farm large enough to comfortably support a family of say five persons (man, wife, and three children), we have some figures from Colonel L. C. Byce, of Petaluma, who has been identified with the business in that great poultry center almost from its infancy, who has had great opportunities for a study of the industry, and who may be regarded as an authority.

Land required, from three to five acres, five preferable; cost, approximately $500. Character of land, sandy or gravelly soil preferred, next best sandy loam, adobe least desirable. Land should have natural drainage, and if the slope is toward the east so as to have the benefit of the early morning sun, so much the better. Cost of five-room cottage, $1,200 to $1,500, according to finish; barn suitable for horse and cow, $150; poultry houses, $20 per 100 fowls, or $240 for 1,200; a six-foot, two-inch mesh wire fence, about 15 cents per running foot, or for five acres $280; horse, $150; cow, $50; wagon, $100; well, pump, pipe, and household furniture, $250; poultry stock, $500; incidentals, $30.

These figures, which are based on the cost of buying all material and hiring all help, counting the house $1,250, aggregate $3,000. They mean good land, a good house, a good horse, good wagon, good cow, good stock, good fence, and fairly good outbuildings. A family can start with a much cheaper house, with a poorer horse and poorer wagon, and other articles of less cost, and thus cut the total very materially; or by the man and his boy giving a hand in helping to build the house, the fences, the barn, and the chicken houses, the quality of the articles in the first estimate can be had at a very much less cash outlay.

On this place one acre can be devoted to family orchard, garden, stable yard, and house yard, and four acres to poultry. Colonel Byce says, "This will suffice to keep from 1,000 to 1,500 laying hens. Usually, one can keep 300 to 400 laying hens to the acre of land. Of course, where it is desired to raise a number of small chicks calculation

must be made for them. One half acre of ground is enough land on which to raise chicks to replace the old fowls." It must be borne in mind that the business requires diligent and intelligent care, and the more chickens one undertakes to maintain on any given sized piece of ground the more vigilance is required in keeping the place clean.

It is safe to estimate that the cost of feed will average $1 for each hen per year. The more green feed the garden produces the more this figure can be reduced.

"The profits," Colonel Byce says, "depend much on the man—the care, attention, and intelligence he puts into the business." Some are making as high as $2.25 per hen per annum, but $1.50 per hen is a good average. Some from lack of attention and careless habits, struggle to get along; others, more shiftless, fail entirely. In this it is like all other business. Most men, however, do well and many make money. On the whole, the business is profitable, and for the frugal and intelligent man with limited capital, affords a better income in California, along with a more agreeable occupation, than almost any other industry.

In most places in California fruit trees may be profitably planted on the ground intended for poultry. The chickens fertilize the trees and the trees afford shade for the chickens, while the fruit from four or five acres of thrifty orchard will add materially to the annual income.

In this connection it may be mentioned that notwithstanding the improved methods adopted and other stimulus to the business in late years, the average price of eggs in the United States for 1905, and 1906, about 25 cents, is higher than since the war period, when the average jumped from 15 cents in 1862, to 20 cents in 1863, to 28 cents in 1864, and to 35 cents in 1865, the highest ever recorded. After that the price gradually lowered to an average for the period from 1870 to 1900 of about 20 cents per dozen. Since 1900 the prices have gradually and uniformly tended upward.

THE AMERICAN HEN.

By PROF. NEWTON CLARKE.

In North Pacific Rural Spirit.

The cackling of the geese is said to have saved Rome, and the cackling of the hen has made many a home.

All honor to the American hen. She works harder and earns more, yet receives less consideration than any other creature that serves us.

The busy, happy little hen,
In open field or picket pen,
Goes swinging at her daily toil
To scratch a living from the soil.
She's through the orchard and up the hill,
For seeds and bugs her crop to fill;
And when her daily round is made,
A nice fresh egg she's always laid.

What adds so much life and cheer to the farm home as a fine flock of poultry, and what looks so lonely, so unfurnished and unfinished as a farm without chickens? From early morn till dewy eve the crowing of the cocks and the cackling of the hens remind you that at least one set

of busy workers never goes on a strike for higher wages. No matter what comes or what goes, good times or bad, high wages or low, the busy hen keeps up her daily task of turning out the nicest article of diet put up in the neatest, most convenient package of all the products conjured by the ingenuity of those who cater to the appetites of their customers. The egg is an ideal food, palatable, rich in substance, yet easy of digestion. Good alike for laborers or invalids, rich or poor, young or old, and always ready if you "keep a hen." And when the biddy has served a reasonable time at egg production, what makes a finer family feast than a stew of her carcass with plenty of dumplings and good thick gravy to sop both sides of your biscuit in? There's a piece to suit the palate of every one—the drumstick, the wing, the breast, the back, the light meat, the dark meat, the gizzard, the liver, the heart, and the sack the eggs grow in—more variety of flavor and texture than you would have in a half-dozen kinds of meat and fish and, like the egg, all done up in one package. Did you ever stop to think what a handy, valuable thing the chicken is? Nothing kept on the farm gives as large returns for the capital invested or the care bestowed, and the enormity of the poultry business is not comprehended till we stop to compare it with other industries that are thought of as being of far greater import. It seems unreasonable to think that the American hen can produce wealth equal to the capital stock of all the banks of the New York clearing-house in a little less than three months, and that in less than sixty days she can equal the gold production of the United States. And, while it is hard to comprehend the fact, statistics prove that she can pay off the interest-bearing debt of the United States in one year and one month. A little deliberation upon these facts should command profound respect for the "old speckled hen."

Solomon said, "Of the making of books there is no end." If he had lived to-day he might have said, "Of the making of breeds there is no end." But from the smallest bantam to the largest Asiatic, each has its particular attraction and special value and every one who has any love for feathered fowls can be pleased in style and color of plumage.

It seems surprising that an industry of so much importance, one of such general interest, and one capable of so much expansion, should have been so long classed among the little things and almost utterly ignored.

When the farmer wishes information about any other animal or any crop raised on the farm, he has but to send a request to his State experiment station and a practical bulletin will be forthcoming. Not so when he gets into trouble with the poultry. It is a notable fact that not more than two or three of all the agricultural colleges of America have paid any attention to investigation along this line and standard bulletins are not to be had. If the farmer or young fancier applies to the poultry journals, his replies are as apt to be in direct contradiction as otherwise. It will not always be so. Secretary Wilson, of the United States Department of Agriculture, is establishing a poultry department, and it will not be many years till all the agricultural colleges will be adding instruction in this branch. Then will the American hen come to her own.

DRY FEED FOR POULTRY.

In a bulletin issued by one of the Eastern States that has experimented extensively on the subject, we find the following information on poultry-feeding:

For many years warm mashes made from mixtures of different meals, sometimes with the addition of cooked vegetables, were given to the hens every morning during the winter season and in warm weather mashes of similar composition but mixed with cold water were fed. The hens seemed to like mashes made in this way better than anything except corn, and if fed anywhere near enough to satisfy their appetites, they would load themselves with food and then sit down in idleness during the early part of the day. They were not willing to scratch in the floor litter for the wheat, oats and cracked corn that had been buried there for them.

The losses of hens from what appeared to be the system of feeding, caused the change of the time of feeding the mash, from morning until near night, and giving the cracked corn, wheat and oats, in the litter in the morning and near noon.

These changes resulted in the better health and productiveness of the birds, but the crowding for the mash at feeding time, and the hurried filling of their crops to repletion even near bedtime, did not argue for the best.

Several different plans of feeding were compared by testing them for a year and finally the moist mash was abandoned altogether. The present system of feeding has been practiced here for two years and is regarded as the best method thus far used. The dry meal mixture is composed of the same materials in the same proportion as the moist mash was, but the method of feeding it is different. It is kept within reach of the birds at all times but they never stuff themselves with it. It is rich in the materials from which hens make eggs. Hens that lay many eggs must be generously nourished. In the changes in feeding made it was not the quantity or composition of the ration that was altered, but the feeding habits of the birds.

Early in the morning for each one hundred hens, four quarts of screened cracked corn are scattered in the litter, which is six to eight inches deep on the floor. This is not mixed into the litter, for the straw is dry and light and enough of the grain is hidden so the birds commence scratching for it almost immediately. At ten o'clock they are fed in the same way, two quarts of wheat and two quarts of oats. This is all of the regular feeding that is done.

Along one side of the room is the feed trough, with slatted front. In it is kept a supply of dry meals mixed together. This dry meal mixture is composed of the following materials, viz: 200 pounds of good wheat bran, 100 pounds of corn meal, 100 pounds of middlings, 100 pounds of gluten meal or brewers' grain, 100 pounds of linseed meal, 100 pounds of beef scrap.

These materials are spread on the floor in layers one above another and shoveled together until thoroughly mixed, then kept in stock, for supplying the trough. The trough is never allowed to remain empty. The dry meal mixture is constantly within reach of all of the birds and they help themselves at will.

Oyster shell, dry cracked bone, grit and charcoal are kept in slatted troughs and are accessible at all times. A moderate supply of mangolds and plenty of clean water are furnished. About five pounds of clover cut into inch lengths is fed dry, daily to each one hundred birds, in winter. When the wheat, oats, and cracked corn are given, the birds are always ready and anxious for them and they scratch in the litter for the very last kernel, before going to the trough where an abundance of food is in store.

It is very evident that they like the broken and whole grains better than the mixture of the fine, dry materials; yet they by no means dislike the latter, for they help themselves to it, a mouthful or two at a time, whenever they seem to need it, and never go to bed with empty crops, so far as noted. They apparently do not like it well enough to gorge themselves with it, and sit down, loaf, get over-fat and lay soft-shelled eggs, as is so commonly the case with Plymouth Rocks when they are given in the morning warm mashes in troughs.

Some of the advantages of this method are that the mash is put in the troughs at any convenient time, only guarding against an exhaustion of supply and the entire evidence of the mobbing that always occurs at the trough feeding, when that is made the meal of the day, whether it be at morning or evening. There are no tailings to be gathered up or wasted, as is common when a full meal of mash is given at night. The labor is very much less, enabling a person to care for more birds than when the regular evening meal is given.

EGGS IN WINTER.

In view of the high prices of eggs in California during the winter months, some suggestions as to how to have the hens lay during this season ought to be of more than passing interest. W. R. Graham, poultry manager and lecturer of the Ontario Agricultural College, has this to say on the subject:

To produce eggs in winter time, we have to consider the stock, the quarters or housing, the feed, and the weather.

The stock needs to be the best obtainable. An ideal bird for winter egg production is a pullet that is mature at about November 1st, and is strong and vigorous, and of a good laying strain. Something depends upon the breed, but more on the strain of the breed; also much upon a good strong constitution, and an abundance of vigor. These are the essential points.

To get pullets of such birds as Rocks, Wyandottes, and Orpingtons matured by November, it is necessary to hatch them in April. Some seasons May chicks mature quickly and begin laying about the first day of December, but not as a rule. If a pullet does not commence to lay before Christmas, it is doubtful if she will begin much before March, unless the weather is favorable. Then again, good yearling hens that have molted early are likely layers. The problem, how to get hens to molt early, is not entirely solved as yet. No doubt it has been noticed that hens which sit and bring out a brood of chicks from June 10th to July, usually molt about the time they are leaving their chicks. Some

hens that sit earlier also molt early; but as a rule they begin to lay after sitting, and are rather inclined to late molting.

From the above, it would appear that the best method to get the flock in general to molt would be to place the flock under conditions similar to those of the sitting hen. This is done by some egg-farmers with more or less success. The plan followed is to change the hens to a new, free range about July 1st, and feed but very lightly, not more than one handful of grain to each hen daily. The object is to induce the hens to dine largely on grass and water, and *stop egg production.* After being thus treated for from two to three weeks, the hens are again well fed on a good laying ration. In many cases they begin to molt, and, if fed well, get their new coat of feathers quickly, and thereby save time. I have had a few hens which have begun to lay heavily as soon as I have started to feed them well; but this is not very often the case.

Hens over two years of age are seldom good layers. Leghorns, Minorcas, etc., are sometimes good during their third and fourth years; but, generally speaking, the Rocks and such fowls are of little or no use as layers after the second year, being much inclined to become excessively fat.

For *summer egg production* the lighter breeds and late hatched pullets of the heavier breeds are best. Do not expect a hen that has laid well all winter to lay exceptionally well during the summer. A hen that lays early is inclined to show a desire to sit early in the season.

MORAVIAN BARLEY.

While it is five years since the Moravian or Hanna barley was first introduced into California through a five-pound sample sent by the U. S. Agricultural Department to Professor E. W. Hilgard of the Agricultural College of the University of California, and while all the experiments seem to demonstrate its superiority over other barleys in practically all important points, yet we find that but few farmers in California are aware of its existence and still fewer of its properties.

The State Agricultural Society has made careful inquiry of a few farmers who have grown this barley more or less extensively, and if it possesses the qualities which those who have grown it agree that it has, the day ought to be hastened when it shall take the place of the common varieties of barley in all the grain fields of the State. If it is as much better than the common barley as we are led to believe it is from the reports made to us on the subject, then its general introduction throughout California one year earlier than might result through ordinary channels would be worth to the farmers of the State, in the increased yield alone, to say nothing about a better price by reason of its better quality, more than the cost of maintaining the State Agricultural Society for a good many years. Without affirming or denying its properties, therefore, we state the points claimed for it in the hope that barley-growers may be induced to try it for themselves, and thus earlier reap the benefit if their trial should prove this new grain possesses the points in its favor that are claimed.

Mr. August Hagemann, of Livermore, was the first to plant it in California and has been growing it for five years. He says: "The Hanna or Moravian barley has shown more resistance to drouth than the six-rowed common barley. In its normal state it weighs 56 pounds to the bushel; the standard weight of the six-rowed or common barley is 48 pounds to the bushel. The average yield under equal conditions is in favor of the Moravian. It is an excellent feed barley as well as a brewing barley. Its malt shows by analysis to have a larger percentage of extract than chevalier barley. As an export barley for Australia and England it should have a good demand, as this type of barley is almost exclusively used in those countries for malting."

Mr. H. C. Compton, of Chico, is another grower of Moravian barley, and he says of it: "In 1905, which was an unfavorable year for crops, this barley (Moravian) made about two sacks more to the acre than the common barley on the same kind of land. When it is clean it weighs 140 pounds to the sack."

From personal inspection we can say the grain is large, plump, and bright, and at a glance impresses one as being of superior quality. Samples from California were exhibited at St. Louis and at Portland, and at both expositions expert judges awarded it a gold medal.

As to the history of the barley, Mr. David Fairchild, of Washington, D. C., says: "The barley in question was not secured by the American Consul in Moravia, but by myself personally while abroad as explorer for the Bureau of Seed and Plant Introduction of the United States Department of Agriculture. I personally talked with the originator of this barley, E. Ritter Proskowetz, of Kwassitz. It is claimed to be one of the best brewing barleys in the world, and is noted for its qualities of early ripening, unusually heavy yields, and special mealiness, which latter, together with other qualities of kernel, renders it one of the great favorites among the German as well as the Austrian brewers."

Von Proskowetz claims for the variety a pedigree and says that it was selected as a single plant from some barley which he knew to be of very old Moravian origin. Through careful selections he has been able to bring its productivity up to 3,700 kilos per hectare (about 65 bushels to the acre) and shorten its period of growth by over a week. It is a light straw producer, suited especially to light and sandy loams. Owing to its early ripening quality, it is especially valuable in Hungary, where the hot season occurs in the latter part of July, but after the Hanna barley has so far matured as to be little influenced by it. Owing to its heavy yielding capacity, earliness and high grade as a brewing grain, this variety is driving out all other sorts in Austria, and every year large quantities of seed grain are imported into Hungary.

SEED SELECTION AND CLUB WORK.

Professor G. W. Shaw, of the Agricultural Department of the University of California, has recently issued a bulletin on the subject of seed-breeding and seed-selection by farmers, gardeners, etc. No one is more competent to treat this important question than Professor Shaw, and that his words may bear the fullest fruit every farmer in California should send to him for a copy of his bulletin and should study it and act upon it.

We can hope to add nothing to what Professor Shaw has said as to the beneficial results of planting only the most perfectly developed seed, but we can emphasize the importance of the subject and call attention to the fact that Eastern farmers are manifesting much more interest in the matter of seed-breeding and seed-selection than are the farmers of the West, and that they are profiting accordingly.

The importance of breeding from select animals is accepted everywhere, and the Eastern farmer has come to realize that good, long ears of corn, with deep kernels, small cobs, straight rows, and filled to the end, can only be had from like parentage, and consequently he is becoming more and more careful in the selection of his seed. From the same land, and with the same outlay for planting, cultivating, and harvesting, he reaps a much larger yield, and the difference is just that much added to his profits. What is true of corn is true of all the vegetable kingdom, and when the California farmer takes as much pains in selecting his seed wheat and barley as the Eastern farmer does in selecting his seed corn, he will find the yield and quality of his crop relatively improved. He should no more consent to sow poor, half-developed wheat on his land than he would to breed his fine cow to a scrub sire, or his favorite mare to a plug horse. The ignoring of the common laws of nature in one case is attended by the same results as in the other.

Even in India, where the people are presumed to be but partially civilized, they recognize the importance of planting only the best, as it is their custom to drop their seed wheat from a high platform in the face of a strong breeze and select for planting only those heavy kernels which fall nearest to the wind.

The California farmers should take up this subject vigorously, agitate it, and apply it to everything they plant. Professor Shaw is at the head of the seed-breeding experiments of the University and can give those who address him many valuable suggestions regarding the most approved seeds and ways and means of securing it. In the meantime, any farmer can at least screen out his very best and plumpest grain for planting, and this he should certainly do. The proper time to make the selection of grain, however, is before it is harvested, when regard can be had to the strength of the straw, the size and fullness of

the heads, and the plumpness of the kernels. While advising farmers to at least select good, plump, and clean grain for this year, we suggest that when their grain is ripe for harvest they begin the practice of selection by going through their fields and picking out the biggest and best filled heads for seed the year following. If in this way enough is secured for only one acre it will be sufficient to demonstrate the value of the work, and when once convinced that it pays the effort in the direction of continued improvement will be followed as a matter of self-interest.

We are not pressing this subject because we believe the farmers to be ignorant of the facts to the extent that they are indifferent, and as a class whose welfare is so closely allied to the welfare of all other interests and the country at large, they should not be indifferent to any effort that promises to better their condition. Wherever there is a school house in a farming community there should be a Farmers' Club, where not only such subjects as seed-breeding and seed-selection can be considered, but where all questions affecting their interests can be discussed and acted on, where the results of experiments can be made known, and where by acting together in different ways much can be done for the benefit of the community which individual effort may not be able to accomplish.

More than 1,500 fine-blooded, high-class hogs were exhibited last fall at the Nebraska State Fair. When the writer was told this he suggested to the Secretary of the Nebraska Agricultural Society that they must have a great many breeders of thoroughbred hogs in Nebraska. "We have," said the Secretary; "you see, Farmers' Clubs are very numerous in this State, and they send out men to scour the country for the best boars that can be had and the clubs buy them and establish them in their several communities. Then if the individual farmer can afford to buy one thoroughbred sow he soon has some thoroughbred hogs, and in this way you may say we have an unlimited number of thoroughbred breeders, while the Nebraska hog is coming to the front as the best in the country." The same Secretary went on to explain that while the Nebraska Farmers' Clubs, by coöperative effort, were raising the standard of the Nebraska hog, they were also doing much in the same way to improve the Nebraska horse, cow, and sheep. In this respect Nebraska is simply doing what is being done in practically all of the Eastern and Middle Western states. These same clubs have annual exhibits in the fall of the year of farm and garden seeds which afford the members an opportunity to study points of excellence and make comparisons. When the fair is over they auction off the samples to the highest bidder, and for the best the bidding is generally quite spirited, as the Eastern farmer has become thoroughly convinced of the great value of choice seed.

WORLD INDUSTRIAL NOTES.

Valuable Liberian timber is available for the American markets, reports Consul-General Lyon, of Monrovia. The woods comprise red and white mahogany, red and white whistmore, red and white oak, cedar, cherry, corkwood, brimstone, and mulberry. Mr. Lyon gives the name of a business man [which is on file at Bureau of Manufacturers] who desires to ship this timber direct to the United States.

C. G. Hopkins shows that as an average of forty-two different tests by the Ohio Station, extending over a period of seven years, "the average value of farm manure was found to be $1.99 per ton, measured in increased crop yields produced, but when 40 pounds of finely ground rock phosphate were added to the ton of manure, its average value was found to be $3.23 per ton, making an increased value, due to the addition of the phosphorus, of $1.24 per ton of manure." The 40 pounds of rock phosphate used cost about 16 cents.

According to Consul-General George E. Anderson, at Rio de Janeiro, the linen industry of the world may possibly be revolutionized by the discovery and development of a linen plant indigenous to Brazil and some of the great fertile plains of South America. The new plant is known as "Canhamo braziliensis perini" or "Brazilian linen." It is named for its discoverer, Dr. Victorio Antonio de Perini, and its practical development is now being effected upon several experimental plantations, the most notable of which is at Boa Vista, in the State of Rio de Janeiro. The development was commenced with the assistance of the State government and has continued to a point where it may be stated without question that the fiber is a success and that its influence will be felt at once in the fabric world. The product of the plantations now established has been contracted for by British interests at a very profitable rate. One of the plantations established includes an area of 500,000 square meters of the growing plants at Rodeiro, and the one at Boa Vista will soon have over 2,000,000 square meters.

Consul J. C. McNally furnishes from Liege the following statistics of the consumption of strong drink and tobacco in Belgium: The population in 1905 was 7,074,910, and the consumption of beer reached the enormous quantity of 428,018,990 gallons, of which 422,618,714 represented home manufacture, while 5,400,276 gallons came from abroad. The consumption of foreign alcohol was 325,447 gallons, while that of home manufacture was 12,963,986 gallons. The consumption of foreign tobacco was 25,547,427 pounds, and of home-raised 26,742,273 pounds. The yearly consumption of beer per head was about 60 gallons, of wine about 5 quarts, alcohol (50°) about 8 quarts, and tobacco about 7 pounds.

There are no modern dairies in Panama, but in the Canal Zone, in the city of Panama, and throughout the interior, establishments may be found where cows are kept and milk, such as it is, is furnished to

consumers. The management of these so-called dairies is carried on in a very primitive manner and furnishes a poor quality of milk and which, in quantity, is not sufficient to supply the demand. The milch cows are rarely given shelter, very little care is taken of them, they being compelled to forage around for feed. Milk is sold at from 20 to 30 cents gold per quart, and is usually watered before it reaches the consumer, and, poor as it is, is hard to obtain. Hence, condensed milk and evaporated cream have taken its place almost completely in hotels and private houses.

The total value of the exports of American provisions and dairy products for the year ending June 30, 1906, was $210,990,065, against $169,998,873 in 1905. The exports include 64,523,359 pounds of canned beef, valued at $6,430,446; 268,054,227 pounds of fresh beef; 4,719,805 pounds of cured beef; 361,210,563 pounds of bacon; 194,267,949 pounds of hams; 155,265,158 pounds of pork; 741,516,886 pounds of lard; 221,452,249 pounds of oleo oil and oleomargarine; 7,926,786 pounds of sausage; 27,360,537 pounds of butter, and 16,562,451 pounds of cheese.

Consul Covert, of Lyons, in a report on artificial silk, says: Several varieties of artificial silk are in the market in France, displayed in some of the stores and offered for sale at figures much below the genuine article. Next to Chardonnet the viscose is the most common. It is one of the valuable forms of dissolved cellulose, which may be precipitated and made to assume almost any form desired; that is to say, it may be precipitated into filaments of thread as fine as a spider's web or in masses that can be made as hard as rubber.

The British Board of Trade is not only sending commercial agents to Canada, but is dispatching commissioners acquainted with the various countries to South Africa, Australia, South America, Siberia, and Persia. The Canadian representative will visit every considerable place from Halifax to Victoria.

It is recognized by the highest medical authorities that disease germs are widely scattered by the dust clouds which motor cars place in motion, and that the dust thus circulated is one of the causes of consumption and diseases of the throat and lungs. Merchants' stocks are also damaged. Many protests and demands for relief have been made. Liverpool has been working on remedies, and satisfactory results have been secured through the use of oil sprinkled upon macadam roadways. The surface having the cleanest and whitest appearance was that coated with creosote oil mixed with rosin, while that covered with creosote oil mixed with tallow had the least odor. The surface covered with ordinary petroleum was the first to show the dust. The next in order was a mixture of creosote oil with rosin and tallow, and then the hot creosote oil alone. Creosote oil mixed with pitch, cold creosote oil, and hot creosote oil mixed with a small quantity of pitch gave good results, but the latter gave a bad appearance. The heavy black oil (coal-tar waste oil) lasted slightly longer than the creosote oil and was much cheaper. The Texas crude petroleum gave the most lasting results, and portions of the road heavily coated with this oil showed a somewhat glazed surface formed of oil and dust. From the standpoint of the wear and tear of the road surface, the oiling on the whole has proved advantageous.

According to reports received at Melbourne, Consul-General Bray

states that recent shipments of chickens from Australia to England have been very successful. Size and uniformity must be adhered to, and white-legged fowls are most acceptable in London, being worth 6 pence (12 cents) per head more than others. Chickens weighing three or four pounds sell best, and it is said 5,000 cases could be taken next season if received at the proper time and in good condition.

Consul F. W. Mahin reports that the price of illuminating gas in Nottingham, under municipal control, is 60 cents per 1,000 cubic feet to ordinary consumers, with a slight reduction to large users. This has been considered quite a low price, but seems extortion in comparison with the rate given by the town of Widnes, in Lancashire. The price there is now 32 cents to small consumers. Large consumers pay from 22 to 26 cents.

Consul Marshal Halstead, of Birmingham, England, writes: "It is my opinion that if some association were to give a demonstration of proper methods of cooking and treating dried and evaporated fruits at some of the food exhibitions held annually throughout England, or if the demonstrations were given on the same system which American breakfast food manufacturers employ, the sale of dried and evaporated fruits would greatly increase. The sale of canned fruits, my informant said, was very large, but bottled goods have a small sale, owing, no doubt, to the fact that the cost is so great."

Many German concerns own dwelling houses, and rent them to workmen at actual cost. They provide restaurants and meals at actual cost, furnish fuel at wholesale cost, give transportation in whole or part to employés living at a distance, pay pensions in certain cases, and work people's reading rooms, baths, hospitals, savings banks, and cooking schools for girls are maintained.

The canning factories now working in Spain number 268, of which 147 are exclusively devoted to sardines, and the remaining 121 to fruits and vegetables.

Consul A. Gaulin, of Havre, quotes the statement of the Feuille Vinicole de la Gironde that the world's wine crop in 1905 reached nearly 4,000,000,000 gallons, divided among the different countries approximately as follows:

	Gallons.		Gallons.
France (including Algeria and Tunis)	1,710,900,000	Switzerland	22,190,000
Italy	856,520,000	Australasia	7,925,000
Spain	428,000,000	Servia	6,605,000
Austria-Hungary	192,800,000	Oceania	6,605,000
Portugal	108,320,000	Brazil	5,600,000
Germany	79,600,000	Cape Colony	4,490,000
Russia	76,620,000	Azores, Canary, and Madeira Islands	3,830,000
Chile	74,200,000	Uruguay	2,780,000
Roumania	52,840,000	Peru	2,400,000
Argentine Republic	34,350,000	Bolivia	610,000
Turkey	34,350,000	Mexico	425,000
United States	34,000,000		
Bulgaria	29,100,000	Total	3,775,060,000

Europe gave over 95 per cent of the total yield and North and South America about 4 per cent. France alone produced 45 per cent, and France, Italy, and Spain combined 78 per cent. It may not be uninteresting to note that France is the largest importer, as well as the largest exporter of wine in the world.

WHAT THE FAIRS TEACH.

From "North Pacific Rural Spirit."

Our agricultural fairs are indicators of the progress of our agriculture. To those who have attended these institutions for a number of years, the advancement is more than apparent; it is self-evident. The marked improvement in live stock shown, the increased amount of improved machinery, the better quality of farm products and fruits, all show the signs of progress. The farmer himself is a far different person from the farmer who attended the fairs of half a century ago. The man who brings his family to the fairs to-day is well dressed and has all the appearance of thrift, and if you happen to engage him in conversation he will surprise you with his general knowledge of things. The individual with unkempt hair and clothing, trousers thrust in his boots and with a timothy straw in his mouth, which one sees so often in caricatures, is a thing of the past. He is no more, nor ever will be. He is a changed person. Why all this change? The farmer of the present day is a man who reads and thinks. As Secretary Wilson said: "The farmer of the past went to church behind a yoke of oxen, but the farmer of to-day rides in the latest types of vehicles and wears diamonds."

There are few sections of the country where the population fails to grasp the present opportunities, but they are growing increasingly smaller. As the farmer reads and thinks, he grows better live stock, improves his farm and grows better crops, builds better houses and dresses himself and family better—in fact, his standard of living is raised. The difference between farm and city life, as to the greater advantages of the latter, are fast disappearing, and the former will soon be the more desirable of the two. The fairs are good places to study these changes, for, as the farmer progresses, he makes himself more evident by better exhibits of all kinds, and much of the success of our recent fairs should be attributed to the farmers as well as the fair management.

CALIFORNIA'S CEREAL WEALTH.

The Legislature of 1905 passed an Act requiring the Supervisors of the different counties of California, through a statistician to be appointed by them for the purpose, to report certain statistics to the State Agricultural Society once each year, on blanks to be provided by the latter for the purpose. Under this Act the first reports came in the latter part of 1905 and the figures given were to cover that year. All the counties did not report, and some have not reported for 1906. A few Boards of Supervisors seem disposed to ignore the law, in spite of entreaty or protest. But from those that reported some figures are obtainable of more than passing interest. In considering these figures which we take from the returns for 1905, the reader must remember they are the first reports sent in and the statisticians did not have their work so well in hand as they will after some practice and a little study of the conditions. They can at least be regarded as a fair approximate to the facts.

THE CEREAL OUTPUT FOR 1905.

Taking the returns for forty California counties, therefore, out of a total of fifty-seven counties, we find the cereal acreage, and yield and value for 1905 to be as follows:

Wheat, 1,265,810 acres; yield 409,831 tons, or 13,661,034 bushels, valued at $11,105,595.
Barley, 1,186,105 acres; yield 440,995 tons, or 17,639,800 bushels, valued at $9,426,518.
Oats, 190,865 acres; yield 173,200 tons, valued at $4,157,981.
Corn, 47,982 acres; yield 76,197 tons, valued at $866,136.
Rye, 25,669 acres; yield 10,981 tons, valued at $67,934.

This gives a total grain acreage of 2,716,429; a total yield of 1,111,204 tons, of a total value of $25,624,164.

The same reports from the same counties give the hay crop for the same year as follows:

Alfalfa hay, 260,577 acres; yield 1,249,650 tons, worth $15,096,611.
Grain hay, 2,007,922 acres; yield 2,285,323 tons, worth $16,486,987.
Grass hay, 114,766 acres; yield 162,400 tons, worth $716,400.

These give a total hay acreage of 2,383,268; total yield, 3,697,373 tons; total value, $32,299,998.

These figures show the total value of hay and grain to be $57,924,162. It is significant, however, that while the hay acreage is 333,171 less than the acreage of grain, the value of the hay crop is $6,675,834 more than the value of the grain crop.

These figures are aggregated from the returns from forty counties. Taking them as a basis it is safe to add to them one third in lieu of the output of the seventeen delinquent counties. To arrive at an estimate

for the whole State, on this basis we find the total grain acreage of the State to be 3,621,905, the total grain yield 1,481,606 tons, and the total value of all grain $34,165,554. The total hay acreage would be 3,177,690, the total hay yield 4,929,830 tons, and the total value of all hay would be $43,066,664. These figures give a grand total acreage of grain and hay in California of 6,799,595, a total yield of 6,411,436 tons, of a total value of $77,232,218.

THE CEREAL OUTPUT FOR 1906.

For the year 1906 there were forty-eight counties that sent in reports, and these show a total cereal acreage, and yield and value as follows:

Wheat, 1,458,284 acres; yield 720,023 tons, or 24,000,767 bushels, valued at $13,289,904.
Barley, 1,750,756 acres; yield 849,490 tons, or 33,979,600 bushels, valued at $16,987,575.
Oats, 314,507 acres; yield 131,126 tons, valued at $3,331,980.
Corn, 71,879 acres; yield 65,106 tons, valued at $1,532,520.
Rye, 21,158 acres; yield 6,629 tons, valued at $286,255.
Buckwheat, 400 acres; yield 300 tons, valued at $7,500.

This gives a total grain acreage of 3,616,984; a total yield of 1,772,674 tons, of a total value of $35,425,734.

The same forty-eight counties give the hay crop for 1906 as follows:

Alfalfa hay, 338,788 acres; yield 1,400,822 tons, valued at $8,713,903.
Grain hay, 1,822,380 acres; yield 2,636,979 tons, valued at $21,628,294.
Grass hay, 54,633 acres; yield 75,376 tons, valued at $570,230.

These give a total hay acreage of 2,215,801, a total yield of 4,113,177 tons, of a total value of $30,912,427.

These figures show the total value of hay and grain to be $66,338,161, and it will be noticed, as was the case in 1905, that the value of the hay crop acre for acre is considerably more than the value of the grain crop. In other words, while the grain crop shows an average return of $9.80 an acre, the hay crop shows an average return of $13.95 an acre. It is the greater yield and value of alfalfa which enlarges this difference, and yet not altogether, as it will be noticed that the average value per acre of grain hay is $10.80, which is $2 an acre more than the average value of grain. It is often a problem with the farmer whether to cut certain foul grain for hay or not. The showing here would seem to be in favor of cutting everything for hay that will not make good, clean grain.

As we have said, the figures heretofore given are computed from the returns from forty-eight counties. This leaves nine counties that have not reported. There are fifty-seven counties in California all told, and as nine is less than one sixth of fifty-seven, it would be conservative to add one sixth to the foregoing figures to arrive at an estimate for the entire State. On this basis we find the total grain acreage of the State to be 4,219,808, the total yield to be 2,068,113 tons, and the total value $41,330,023. The total hay acreage on the same basis would be 2,585,101, the total hay yield 4,798,705 tons, and the total value $36,014,498. These figures give a grand total acreage of hay and grain for 1906 in California of 6,794,909, a total yield of 6,866,818 tons, of a total value of $77,344,521.

The total figures for 1905 were $77,232,595, showing only $111,926 difference in the aggregate value of the cereal crops of the State for the two years, the slight difference being in favor of 1906.

It is worth something to know the acreage and value of the products under consideration, and the foregoing figures returned to us in two successive years, are given as the best estimate that can be made from the resources indicated.

BEANS AND POTATOES.

Returns from the same forty-eight counties, with one sixth added as an estimate for the products of the nine counties that failed to make returns, show the total bean crop of California for 1906 to be 256,751,714 pounds, valued at $8,060,948; for the same year the total crop of Irish potatoes was 355,794,507 pounds, valued at $3,772,446, and the total crop of sweet potatoes was 34,351,835 pounds, valued at $4,171,139.

The total value of all potatoes and beans is $12,250,532. This amount added to the value of cereals gives a total of $89,595,053 as the value of California's leading agricultural staples (exclusive of products of the tree, vine and garden) for 1906.

THE UNIVERSITY FARM.

By PROF. E. J. WICKSON.

The California Legislature of 1905 made an appropriation of $150,000 for the purchase and equipment of a University Farm and to provide instruction in agriculture in connection therewith. The selection and purchase of the farm were made by a commission: George C. Pardee, Benjamin Ide Wheeler, Alden Anderson, B. F. Rush, and Ellwood Cooper. Upwards of seventy sites were carefully examined and reported upon by an expert appointed by the commission, and the commission visited in a body a considerable number of them. A tract of about 780 acres of first-class valley land contiguous to the town of Davisville, in Yolo County, was finally selected by unanimous vote of the commission and purchased for $103,290. The land is upon the established irrigation system of the Yolo Consolidated Water Company, and water rights covering the whole acreage were purchased by the citizens of Davisville for $3,895.53 and donated to the University.

Thus was secured a splendid plant for both demonstrative and experimental agriculture. It is the most important single contribution which the State has ever made to the development of agricultural education. It will supplement all that has been accomplished on the scientific side by furnishing ample opportunity for instruction in farm policy and practice which have not been adequately provided for hitherto. In the future the University students in the agricultural course will be brought face to face with the practical problems of production, and instruction therein will be given concreteness and directness. There will be also the fullest attention paid to the short courses in the various branches of farming which will enable both old and young to devote themselves for a few weeks or months to studies of the best and most profitable ways to handle plants and animals and to satisfy themselves that these advanced ways are best because they embody the latest science involved in each operation and because the quality and market value of the product demonstrate its economic superiority. The instruction on the farm will duplicate neither the instruction nor the equipment at Berkeley. At Berkeley the work will be chiefly analytical—the taking of things to pieces to learn the character and relations of the parts. At the farm the work will be, in a sense, chiefly synthetical—the connection of the parts, the building up of the highest orders of finished products. In this way the University Farm will serve all classes of students, both young and old, and will afford each, according to his needs, instruction which no other State institution provides. It will not duplicate, nor be a substitute for, high school or college, but will be supplementary to all institutions which undertake to associate agriculture in any form with other educational subjects.

This rich inheritance which comes to the College of Agriculture of the University of California must be taken as evidence of full recognition and appreciation of two things. First, the research work and the popular presentation of its results, by Professor Hilgard and his staff during the last third of a century, have convinced the people of California that the fullest knowledge of California conditions of climate, soils, and cultures must be had for intelligent and profitable pursuit of the industries which are based upon them. Second, that the equipment and facilities of the College of Agriculture for teaching the practical arts in accordance with the scientific demonstration of local conditions were pitiably meager and inadequate. Hence arose the popular demand that the College should undertake instruction in California farm practice on much broader lines and that it should do this under actual farming conditions on an easily accessible and widely representative farm and should adapt such instruction to the needs and requirements both of those already enlisted in agriculture and of those who intend to secure livelihood directly from the soil. That the State should place all this value in the hands of the College of Agriculture is a complete demonstration that the foundation laid by it in agricultural science was recognized as sound and enduring and that the men who had given their lives hitherto to the building of the foundation could best direct the expansion on the practical side of instruction so that agriculture, known to be practicable under California conditions, should be faithfully and accurately taught. It is an incontrovertible decision that agricultural research and instruction shall be henceforth intrusted to the University of California in accordance with the organic act which brought this institution into existence nearly forty years ago.

The Regents of the University have proceeded energetically with the equipment of the University Farm as an instructional adjunct of the College of Agriculture. The balance of the original appropriation is being used for the construction of a fully equipped commercial creamery, a large live stock pavilion which will also serve as a general auditorium, two cottages for residence of instructors and foreman, and the purchase of live stock. The Legislature of 1907 appropriated $132,000 for additional buildings, which will include a grand farmhouse for dormitory purposes and special structures for horticulture and viticulture, as well as barns, sheds, and shops. It will also provide for large and varied plantings of trees and vines, for a system of irrigation to carry water to all parts of the farm, for the compensation of instructors, and for general maintenance. Courses of instruction are now being prepared and instructional outfits being provided for them. As soon as possible a full descriptive announcement of instruction will be published, and it is anticipated that the University Farm will be open for students during the coming autumn.

Berkeley, March, 1907.

RESOURCES

OF THE

STATE OF CALIFORNIA.

(BY COUNTIES.)

ALAMEDA COUNTY.

Alameda County fronts the bay of San Francisco for a distance of 38 miles, with an average width of 25 miles, extending to and beyond the summit of the Contra Costa hills, comprising numerous beautiful valleys, besides the broad Alameda Valley, which last is bounded by the waters of the bay on the one side and the Contra Costa hills on the other, and is one of the richest and most fertile valleys in the State.

The principal stream is Alameda Creek. There are other creeks crossing the county and emptying into the bay, two of which furnish water for the city of Oakland. The country around Hayward is one of the great fruit-raising regions, many millions of pounds being shipped annually.

The soils immediately along the bay in Alameda Valley and the marshes formed by the overflow are heavy, but very fertile when reclaimed. Then comes a broad belt of rich, black adobe that is crossed by deposits of alluvium made by shifting channels of streams running down from the Coast Range. In the Niles region are lighter loams. About Livermore are uplands, bench and valley lands. Between the latter two classes the variation in potash, lime, and phosphoric acid accounts for difference in grape crop. Mission San José is characterized by gravelly, upland, adobe soil, and was evidently chosen by the padres of the old Spanish mission for its exemption from frost, caused by its slight elevation above the surrounding valleys. The Pleasanton section consists of agricultural and grazing lands. The soil is a very rich sediment, producing hay, grain, potatoes, hops, and beets in abundance. At Alvarado the surrounding country is a fine farming and fruit region, and gardening and dairying are largely carried on. The fertile, alluvial soil is finely adapted to fruit-growing.

The average rainfall of the county is about 30 inches.

Alameda County was among the first to begin the planting of orchards and vineyards. This county is divisible into three sections—the cherry district, the apricot district, and the vineyard district.

From Oakland to Hayward is the home of the cherry, and in an ordinary year this crop is good for a profit of a quarter of a million dollars.

The apricot section includes all the region east and south of Hayward, but the center is at Niles. The Alameda apricot is high colored and the flavor exquisite. One of the most popular varieties, the Alameda Hemskirk, was originated here. The other varieties preferred are the Blenheim and the Moorpark. A first-class apricot orchard is easily worth $500 per acre, and some could not be bought for $750 or $800. Apricot trees yield from twelve to twenty tons an acre, worth from $20 to $30 a ton. Thousands of carloads of apricots are shipped annually from this county.

While cherries and apricots are the king and the queen of fruits, there are others which do well, among them being the Bartlett pear. The plum is another fruit which thrives, and the smaller fruits and berries are profitably grown.

In Alameda County are the largest currant patches in the United States. The size of an average currant farm varies from twenty to forty acres. Local canneries pack a great number of cases of this fruit, and thousands of chests of currants are shipped away each year.

Almonds, chestnuts, English walnuts, pecans, beechnuts, and hazelnuts are extensively cultivated.

Alameda is par excellence a vegetable-producing county. It has led in this industry for a long time, and the area devoted to vegetables has been increasing at a rapid rate, since the profit in peas, potatoes, tomatoes, rhubarb, asparagus, and several other vegetables is large enough to tempt the owners of the best soil to go into the business.

There are 8,000 acres devoted to vegetables in the county, not including sugar beets, which would add 4,000 or 5,000 acres more.

Many acres in this county are planted to tomatoes, which prove to be a most profitable crop. It is not unusual to find 100 acres of tomatoes growing upon a single farm.

The potato crop is of increasing importance, since it has been found that there is good money in the big Burbank potatoes and other commercial varieties. The best soil will produce from 75 to 80 sacks to the acre, although record yields of 150 sacks have been produced.

The growing of peas for canning has assumed importance. The output of the San Leandro cannery, located in this county, has reached as high as 1,200 cases per day, and 3½ tons of peas have been grown upon a single acre. These peas are sold for $30 per ton.

One of the prosperous agricultural industries is the growing of rhubarb for the California and Eastern markets.

The hop industry is chiefly located near Pleasanton, and during the picking season employment is given to some 2,000 pickers. The Pleasanton hop yards are the largest under one wire in the world. Over sixteen million pounds of cable and of trellis wire are used for the network that spans the twenty-foot poles to sustain the weight of the full-grown vines.

California was the first State in the Union to manufacture beet-sugar on a commercial scale. In Alameda County it has been manufactured for the past thirty-three years. Within her borders is located not only the pioneer beet-sugar factory of this country, but also one of the largest factories in the world. The annual production of beet-sugar in California exceeds that of any other State. Last year the factories produced 100,000 tons of sugar. The product of the land used for this industry is annually worth $10,000,000. In this State are eight factories engaged in the industry. The amount invested in these factories, including working capital, is $20,000,000. Beets in Alameda County average over 14 per cent sugar of 88 per cent purity, and they yield an average of 15½ tons to the acre. The planting season extends from the first of February to the middle of May. This provides a long period of activity for the factory, which begins operations in August, and has continuously maturing crops of beets to handle. Last year there were in Alameda County over 3,041 acres planted to beets. This land produced 45,000 tons of beets, the value of which was $225,000.

The average annual output of salt recovered from San Francisco Bay, in Alameda County, is 100,000 tons, including both coarse and fine salt.

Oakland is the county seat, located on the bay opposite San Francisco, and has for its immediate neighbors the cities of Berkeley and

Alameda. These three cities are very prosperous and have a rapidly increasing population.

The University of California is located near the city of Berkeley, and has an average attendance of 3,500 students.

STATISTICS OF ALAMEDA COUNTY, 1905-6.

General Statistics.

Area, 840 square miles, or 537,600 acres.	
Number of farms	2,484
Number of acres assessed	441,480
Value of country real estate	$15,229,950
Of improvements thereon	$6,060,075
Of city and town lots	$46,296,550
Of improvements thereon	$35,914,325
Of personal property	$17,262,356
Total value of all property	$120,763,256
Expended on roads, last fiscal year	$400,000
Expended for bridges, last fiscal year	$150,000
Number of miles of public roads	824
Road levy per $100, 1906	40 cts.
Value of county buildings	$825,000
Miles of streets, towns and cities	439
Railroads, steam—miles, 134.90; assessed value	$2,071,751
Railroads, electric—miles, 158; assessed value	$4,446,400
Electric power plants—5; assessed value	$339,425
Electric power lines—miles, 60; assessed value	$46,800

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	5,253	3,116	$87,256
Barley	17,436	12,242	302,148
Oats	8,476	4,376	137,808
Corn	1,446	786	20,649
Total cereals	32,611	20,520	$547,861
Alfalfa hay	762	2,862	$25,758
Grain hay	60,224	87,754	1,053,048
Total hay	60,986	90,616	$1,078,806

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	34,542	7,243	41,785
Apricot	279,351	68,211	347,562
Cherry	100,801	19,904	120,705
Lemon	750	250	1,000
Olive	3,700	1,000	4,700
Orange	1,200	700	1,900
Peach	21,750	2,160	23,910
Pear	59,889	11,660	71,549
Plum	27,250	4,250	31,500
Prune	154,575	36,500	191,075
Quince	3,750	300	4,050
Almond	47,975	4,200	52,175
Walnut	3,000	2,400	5,400
Total fruit trees	738,533	161,278	897,311

Fruit Trees and Vines—Continued.

		Bearing.	Non-Bearing.	Total.
Table grapes	acres	145	------	145
Wine grapes	acres	4,125	------	4,125
Total acres grapes		4,270	------	4,270
Blackberries	acres	10	------	10
Currants	acres	265	------	265
Gooseberries	acres	25	------	25
Raspberries	acres	15	------	15
Strawberries	acres	12	------	12
Total acres berries		327	------	327

Fruit, Vegetables, Etc.

	Total Production, Pounds.	Value
Green—		
Almonds	602,331	$72,279
Apples (boxes)	43,670	26,202
Apricots	12,971,663	324,275
Asparagus	1,490,500	59,620
Blackberries (crates)	1,810	5,430
Beans, string	334,000	5,010
Beets, table	541,400	4,872
Cabbage	1,601,420	9,608
Celery	35,000	700
Cauliflower	20,000	600
Corn, table	2,972,500	29,725
Currants	801,000	8,010
Cherries	1,201,000	72,060
Gooseberries	54,250	1,620
Grapes, wine (tons)	5,550	124,875
Grapes, table (tons)	265	7,950
Onions	40,000	750
Pears	4,989,750	74,778
Peaches	783,920	11,758
Peas	13,575,000	135,750
Plums	924,250	9,242
Irish potatoes	8,934,000	89,340
Sweet potatoes	37,625	376
Prunes	2,387,975	119,399
Quinces	22,500	225
Raspberries (crates)	1,195	5,955
Strawberries (crates)	650	1,950
Tomatoes (tons)	19,000	133,000
Walnuts	175,000	25,000
Rhubarb	3,805,000	57,000
Dried—	Pounds.	Value.
Apples	53,750	$5,375
Apricots	84,900	5,094
Beans, string	322,000	9,660
Cherries	20,000	2,000
Onions	826,000	8,260
Pears	206,500	16,520
Peaches	15,700	785
Peas	225,025	2,250
Plums	2,575	128
Prunes	450,675	18,055
	Cases.	Value.
Canned fruits and vegetables, all kinds	600,000	$1,500,000

STATISTICS OF ALAMEDA COUNTY, 1905-6—Continued.

Wines, Brandies, Etc.

	Gallons.	Value.
Wine—Burgundy	30,000	$6,000
Cabernet	20,000	5,000
Burger	4,500	1,150
Champagne Sable Blanche	4,500	1,150
Chateau Iquem	1,200	720
Claret	575,000	116,000
Hock	20,000	46,000
Golden Chasselas	2,000	600
Riesling	16,500	3,600
Sauterne	140,000	4,200
White Wine	60,000	24,000
Zinfandel	115,000	28,000
Totals	988,700	$236,420
Beer (barrels)	78,350	391,750
Brandy (gallons)	9,750	4,875

Livestock Industry.

	Number.	Value.
Cattle—Beef	5,000	$150,000
Stock	14,125	310,750
Thoroughbred	300	13,500
Dairy Cows—Graded.	9,950	298,500
Guernsey	1	----
Herefords	30	----
Holsteins	130	----
Jersey	101	----
Polled Angus	1	----
Red Polled	27	----
Shorthorns	30	----
Calves	6,000	48,000
Swine	6,397	41,580
Horses—		
Thoroughbred	511	204,460
Common	22,619	2,488,090
Colts	1,147	57,350
Mules	310	28,470
Sheep—Common	6,917	22,480
Lambs	4,405	13,215
Angora Goats	41	148
Common Goats	59	177
Wool (pounds)	415,000	----
Mohair (pounds)	350,000	76,902

Dairy Industry.

	No.	Production.	Value.
Creamery products	17	----	$1,031,480
Dairies	87	----	----
Butter (pounds)	--	2,400,969	720,892
Milk (gallons)	--	3,638,110	727,622

Poultry and Eggs.

	Dozen.	Value.
Chickens	19,750	$88,750
Ducks	800	4,000
Geese	120	720
Turkeys (pounds)	30,225	6,045
Eggs	1,117,523	390,133
Total value		$489,648

Miscellaneous Products.

	Pounds.	Value.
Hops	300,000	$33,000
Garden and flower seeds	----	30,000
Sugar beets (tons)	45,000	225,000

Manufactories.

	Number of Employés.	Value of Product.
Bookbinderies	----	$50,000
Paper boxes	----	30,000
Wood boxes	----	474,000
Boat building	500	1,807,725
Brooms	----	31,467
Cigars	350	1,284,100
Clothing	600	1,987,330
Acids, etc.	140	450,000
Confectionery	500	1,300,820
Chemicals, paste, etc.	----	750,000
Crackers	20	100,000
Flouring mills (milling, all kinds)	350	2,551,567
Farming implements, etc.	50	116,495
Jewelry	100	300,000
Leather goods	200	500,000
Job printing	375	685,180
Machinery	6,500	11,224,958
Matches	20	55,000
Meat products	500	1,726,556
Hides		250,000
Lard		250,000
Meat packed		250,000
Tallow		100,000
Pickles, vinegar, etc.	200	750,000
Sewer pipe	150	500,000
Planing mills	750	2,450,900
Potteries, sewer pipe, etc.	500	2,000,000
Salt	225	375,000
Soap	68	250,000
Sugar, beet	50	475,750
Tanneries	30	155,844
Tin and galvanized iron, stoves, etc.	35	180,000
Paints, oils, etc.	150	1,000,000
Yeast	10	20,000
Wood turning and carving	12	50,000
Cotton, silk, hemp and jute	600	1,060,492
Wagons and carriages	25	115,150

Productions Shipped Out of State.

	Employés.	Value of Product.
Crushed rock	450	$855,178
Felting, roofing material and paraffine paints	450	600,000
Unsegregated	178	650,000

Summary.

Total manufacturing	$38,331,026
Total agriculture	13,158,370
Total	$51,489,396

BUTTE COUNTY.

Butte County has an area of 1,777 square miles, and has three sections—mountain, foothill, and plain. It is situated in the northern part of California, yet is warmer in winter than Florida. There is an abundance of rain, and the supply of water for power and irrigation is unlimited. The county has the Sacramento River on the west, navigable for steamers all the year. The Feather River and its three great branches drain an area of 4,000 square miles.

The California and Oregon Railroad, a part of the Southern Pacific system, traverses the county north and south. The Butte County Railroad, the Northern Electric, and the Western Pacific Railroad are in the northern and eastern parts.

Butte County produces all kinds of citrus and decidous fruits. At an elevation of 3,000 feet, on the Cohasset ridge, are grown the finest of apples without irrigation. Mr. Polk received a silver medal for apples at the St. Louis World's Fair.

The county produces the best of farm products.

The Government Plant Introduction Garden is located in Butte County.

The Diamond Match Company of Chico employs 500 men.

Oroville, the county seat, is the center of the largest dredge mining field in the world. There are 45 dredges in operation, employing 2,500 men.

The important towns of Butte County are Chico, Oroville, Gridley, Biggs, Stirling City, Honcut, Magalia, and Paradise.

STATISTICS OF BUTTE COUNTY FOR 1906.

General Statistics.

Area, 1,727 square miles, or 1,100,800 acres	
Number of farms	1,553
Number of acres assessed	879,248
Value of country real estate	$12,684,560
Of improvements thereon	$1,984,042
Of city and town lots	$2,360,030
Of improvements thereon	$3,027,255
Of personal property	$4,142,630
Total value of all property	$25,765,310
Expended on roads, last fiscal yr.	$58,827
Expended for bridges, last fiscal year	$34,282
Number of miles of public roads	1,600
Road levy per $100, 1906	40 cts.
Value of county buildings	$147,000
Irrigating ditches—miles, 343⅔; cost	$958,640
Railroads, steam—miles, 91; assessed value	$1,130,687
Railroads, electric—miles, 22.89; assessed value	$38,005
Electric power plants—4; assessed value	$96,500
Electric power lines—miles, 97; assessed value	$32,250
Number of acres irrigated	9,000

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons	Value.
Wheat	77,656	30,362	$771,529
Barley	37,212	22,014	430,504
Oats	4,118	5,000	150,000
Corn	950	1,390	41,060
Total cereals	119,936	58,766	$1,393,093
Alfalfa hay	6,031	44,328	$145,968
Grain hay	48,357	64,785	647,850
Grass hay	430	723	6,690
Total hay	54,818	89,836	$800,508

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	41,295	11,695	52,990
Apricot	16,014	505	16,519
Cherry	7,479	1,071	8,550
Fig	9,450	826	10,276
Lemon	1,011	247	1,258
Nectarine	2,127	21	2,148
Olive	60,000	7,593	67,593

STATISTICS OF BUTTE COUNTY FOR 1906—Continued.

Fruit Trees and Vines—Continued.

	Bearing.	Non-Bearing.	Total.
Orange	148,887	39,435	188,322
Peach	186,352	52,753	240,105
Pear	35,359	5,287	40,646
Plum	6,785	210	6,995
Prune	111,059	19,397	130,496
Quince	1,020	23	1,043
Other kinds	5,000	----	5,000
Almond	79,190	19,304	98,494
Chestnut	193	30	223
Pecan	102	8	110
Walnut	2,626	444	3,070
Total fruit trees	713,449	158,851	873,838
Raisin grapes (acres)	333	----	333
Table grapes (acres)	237	37	274
Wine grapes (acres)	174	72	246
Total acres grapes	744	109	853
Blackberries (acres)	87	----	87
Currants (acres)	10	----	10
Gooseberries (acres)	5	----	5
Loganberries (acres)	22	----	22
Raspberries (acres)	40	----	40
Strawberries (acres)	19	----	19
Total acres berries	183	----	183

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	2,318,000	$34,760
Apricots	31,000	1,240
Asparagus	2,750	1,750
Blackberries	301,475	24,086
Beans	112,850	4,585
Beets	28,580	286
Cabbage	144,500	2,890
Celery	1,200	150
Cauliflower	8,000	320
Corn	232,020	3,480
Currants	9,050	724
Cherries	134,630	8,075
Figs	125,100	1,777
Gooseberries	1,000	40
Grapes	816,900	16,340
Grape-fruit	496,300	4,965
Lemon (boxes)	1,090	2,180
Loganberries	116.240	8,137
Nectarines	177,000	3,540
Onions	2,500	50
Orange (boxes)	466,079	559,113
Olives	1,446,000	44,880
Pears	1,993,150	28,797
Peaches	2,967,215	70,827
Peas	30,950	619
Persimmons	15,800	574
Plums	154,700	1,547
Irish potatoes	1,348,100	13,481
Sweet potatoes	230,350	2,305
Prunes	2,025,500	20,255
Quinces	81,400	1,628
Raspberries	21,835	1,528
Strawberries	38,550	30,840
Tomatoes	520,500	5,205
Total value		$1,600,634

Fruits, Vegetables, Etc.—Continued.

Dried—	Pounds.	Value.
Almonds	119,580	$17,917
Apples	4,000	200
Apricots	1,000	120
Beans	36,600	106,710
Chestnuts	7,900	790
Figs	790,350	22,710
Nectarines	2,800	280
Onions	191,000	1,810
Pears	114,470	9,157
Peaches	2,326,277	232,627
Plums	52,930	3,698
Prunes	7,084,900	106,273
Raisins	370,275	18,512
Walnuts	66,800	6,680
Totals	11,167,882	$527,484

Canned—	Cases.	Value.
Apricots	5,600	$20,000
Blackberries	325	1,137
Pears	5,000	12,500
Peaches	70,200	210,600
Tomatoes	1,550	2,325
Totals	82,675	$246,562

Wine—Salmon.

Butte County reports an output of 6,100 gallons of claret wine, worth $3,050; and 20,000 gallons of vinegar, worth $200.

It also reports a catch of 160,000 pounds of salmon, worth $6,000.

Livestock Industry.

	Number.	Value.
Cattle—Beef	5,240	$157,200
Stock	29,849	498,435
Dairy Cows—Graded	1,500	60,200
Guernsey	27	1,515
Herefords	127	3,810
Holsteins	164	4,920
Jersey	115	5,750
Polled Angus	50	1,500
Red Polled	42	1,260
Shorthorns	1,818	32,720
Calves	5,383	45,361
Swine	19,861	118,166
Horses—		
Thoroughbred	144	150,325
Standard-bred	139	41,785
Common	9,397	971,365
Colts	1,171	46,840
Mules	2,975	446,250
Sheep—Common	98,910	395,640
Lambs	21,050	52,625
Angora Goats	1,506	6,210
Common Goats	303	606
Total stock all kinds	199,771	$3,038,283
Wool (pounds)	747,322	$101,648
Mohair (pounds)	3,280	720

Dairy Industry.

	No.	Production.	Value.
Creameries	1	28,000	$8,400
Butter (pounds)	--	58,750	14,649
Cream (gallons)	--	480	480

STATISTICS OF BUTTE COUNTY FOR 1906—Continued.

Poultry and Eggs.

	Dozen.	Value.
Chickens	58,183	$290,915
Ducks	209	1,254
Geese	42	504
Turkeys	1,621	44,300
Eggs	2,949,150	737,287
Total value		$1,074,260

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value of Product.
Brick	1	6	350,000	$36,400
Cigars	3	14	500,000	15,000
Confectionery (pounds)	4	8	14,500	2,900
Flouring mills (barrels)	2	14	17,295	70,000
Repair shops	8	500	------	------
Matches	1	5	------	------
Meat products—				
Hides (pounds)		----	126,391	44,202
Lard (pounds)		----	24,848	2,182
Tallow (barrels)		----	1,024	12,288
Olive oil (gals.)		----	126,300	378,900
Pickled olives (gals.)		----	42,000	21,000

Miscellaneous Products.

	Pounds.	Value.
Bees (hives) No., 1766		
Beeswax	2,000	$500
Honey	47,540	4,754
Hops	384,000	57,600
Syrup (gallons)	100	25
Sugar beets (tons)	7,669	34,510
Melons (acres)	100	50,000
Pumpkins (tons)	2,515	3,862

Forest Products.

	Amount.	Value.
Area of timber lands (acres.)	350,000	------
Cedar (acres.)	35,000	------
Pine (acres.)	140,000	------
Fir (acres.)	175,000	------
Sawmills (number)	14	$270,000
Fuel, wood (cords)	91,117	410,026
Laths	190,000	200
Lumber—Pine (feet)	41,400,000	548,000
Fir (feet)	12,000,000	144,000
Piles	2,200	17,785
Posts (pieces)	4,850	4,300
Railroad ties (pieces)	5,521,600	100,432
Sash and door factories (number)	1	1,500
Shakes	405,000	4,050
Shingles	400,000	25,000

Power used for mills and manufactories in county: Steam—number, 14; electrical—number, 4.

Productions Shipped Out of State.

	Amount.
Wheat	10,000 tons
Almonds	100,000 lbs.
Apples, fresh	20,000 boxes
Apricots, canned	5,000 cases
Cherries, fresh	50,000 boxes
Grape-fruit	800 boxes
Oranges	300,650 boxes
Peaches, dried	135,000 lbs.
Peaches, canned	50,000 cases
Pears, fresh	31,250 lbs.
Pears, dried	75,000 lbs.
Pears, canned	2,500 cases
Prunes, dried	5,112,370 lbs.
Olive oil	80,000 gals.
Olives, pickled	25,000 gals.

CALAVERAS COUNTY.

Calaveras is one of the central counties of the State, lying east of the San Joaquin and Sacramento valleys, and west of the summit of the Sierras.

The chief industries of this county are mining and lumbering. Containing 160,000 acres of excellent timber land, it affords a great opportunity for development in the lumber line. It was made famous by its enormous output of gold, ranking among the leading mining counties of the State.

The great Mother Lode passes through the central portion of the county, and contains some of the richest gold mines of the State, viz: the Gwin, the Angels, the Lightner, the Utica, and the Melones. East of this lode lies our great timber section, wherein are the *Sequoia gigantea*, the largest trees in the world. West and south of the mineral lode is the farming portion of the county.

The principal rivers in Calaveras County are the Mokelumne, forming the boundary line between Calaveras and Amador counties; the Middle Fork, the South Fork, the Licking Fork, and Blue Creek, principal branches of the Mokelumne; the Calaveras River with its tributaries, viz: Calaveritas, San Antone, San Domingo, and O'Neal's Creek, drains the central portion of the county; and the Stanislaus (being the boundary line between Calaveras and Tuolumne counties) with its tributaries.

Three electric power lines run through Calaveras County and extend to nearly every town in the county.

An abundance of rainfall gives this county ample water.

Agricultural pursuits are neglected, owing to the great mining and timber resources.

STATISTICS OF CALAVERAS COUNTY, 1905-6.

General Statistics.

Area, 990 square miles, or 633,600 acres.	
Number of farms	2,000
Number of acres assessed	481,762
Value of country real estate	$3,101,340
Of improvements thereon	$1,332,285
Of city and town lots	$201,490
Of improvements thereon	$651,525
Of personal property	$859,720
Total value of all property	$6,146,360
Expended on roads, last fiscal yr.	$20,464
Expended on bridges, last fiscal year	$7,009
Number of miles of public roads	400
Road levy per $100, 1906	33.2 cts.
Value of county buildings	$45,000
Irrigating ditches—miles, 780; cost	$752,000
Railroads, steam—miles, 20.11; assessed value	$250,585
Electric power plants—1; assessed value	$50,000
Electric power lines—miles, 120; assessed value	$60,000
Number of acres irrigated	13,700

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	445	307	$8,420
Barley	505	249	5,040
Oats	1,041	495	12,520
Corn	97	71	2,130
Total cereals	2,088	1,122	$28,110
Alfalfa hay	897	2,720	$21,140
Grain hay	10,335	14,238	166,225
Grass hay	7,707	11,279	107,038
Total hay	18,939	28,237	$294,403

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	14,137	2,201	16,338
Apricot	2,339	180	2,509
Cherry	788	110	898
Fig	2,070	8	2,078
Lemon	26	14	40
Nectarine	220	3	223

STATISTICS OF CALAVERAS COUNTY, 1905-6—Continued.

Fruit Trees and Vines—Continued.

	Bearing.	Non-Bearing.	Total.
Olive	8,262	120	8,382
Orange	1,028	100	1,128
Peach	13,461	1,192	14,653
Pear	4,039	202	4,241
Plum	3,338	154	3,492
Prune	7,190	255	7,445
Quince	412	7	419
Other kinds	77	------	77
Almond	9,035	1,301	10,336
Chestnut	82	20	102
Pecan	------	5	5
Walnut	1,581	380	1,961
Total fruit trees	68,085	6,252	74,337
Raisin grapes (acres.)	14	2	16
Table grapes (acres.)	220	48	268
Wine grapes (acres.)	689	117	806
Total acres grapes	923	167	1,090
Blackberries (acres.)	26	------	26
Currants (acres.)	11	------	11
Gooseberries (acres.)	2	------	2
Loganberries (acres.)	4	------	4
Raspberries (acres.)	15	------	15
Strawberries (acres.)	31	------	31
Total acres berries	89	------	89

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	687,913	$13,341
Apricots	27,440	1,732
Asparagus	15,030	504
Blackberries	63,695	3,636
Beans	105,700	1,771
Beets	60,175	244
Cabbage	224,150	2,354
Celery	3,010	301
Cauliflower	46,000	570
Corn	138,425	2,462
Currants	2,300	19
Cherries	20,110	1,020
Figs	174,685	2,254
Gooseberries	1,000	50
Grapes	3,846,030	40,173
Limes (boxes)	1	5
Lemons (boxes)	177	735
Loganberries	25,180	1,753
Nectarines	1,110	34
Onions	95,300	1,789
Oranges (boxes)	776	2,754
Olives	105,745	4,220
Pears	194,804	3,238
Peaches	530,461	13,023
Peas	32,650	918
Persimmons	100	5
Plums	164,435	2,167
Irish potatoes	585,300	10,811
Sweet potatoes	10,000	200
Prunes	318,275	4,794
Quinces	23,560	522
Raspberries	20,000	600
Strawberries	58,760	2,423
Tomatoes	352,785	5,175
Total value		$125,599

Fruit, Vegetables, Etc.—Continued.

Dried—	Pounds.	Value.
Almonds	89,480	$2,335
Apples	2,210	100
Chestnuts	700	65
Figs	8,715	400
Grapes	1,075	82
Onions	200,930	2,510
Pears	350	32
Peaches	2,570	206
Plums	1,800	150
Prunes	251,230	6,740
Raisins	6,250	312
Walnuts	48,850	5,373
Totals	614,160	$18,305

Canned—	Cases.	Value.
Apples	54	$200
Apricots	26	156
Blackberries	44	220
Beans	9	27
Corn	5	20
Cherries	5	18
Figs	16	80
Grapes	14	42
Nectarines	4	20
Pears	50	200
Peaches	125	600
Plums	20	80
Strawberries	5	25
Tomatoes	183	632
Totals	560	$2,320

Wines, Brandies, Etc.

Number of wineries, 16; number of distilleries, 4; number of breweries 1.

	Gallons.	Value.
Wine—Claret	56,050	$22,420
Port	900	900
Sherry	800	800
Zinfandel	2,000	800
Totals	59,750	$24,920
Brandy	800	800
Vinegar	1,112	343

Livestock Industry.

	Number.	Value.
Cattle—Beef	4,051	$101,250
Stock	22,705	272,460
Thoroughbred	3	225
Dairy Cows—Graded	401	16,040
Jersey	4	200
Calves	10,234	61,404
Swine	3,336	23,352
Horses—		
Standard-bred	54	5,400
Common	3,277	16,385
Colts	423	10,575
Mules	264	26,400
Sheep—Imported	15	150
Common	11,016	33,048
Lambs	5,015	12,537
Angora Goats	54	108
Common goats	2,625	5,250
Total stock all kinds	63,473	$584,784
Wool (lbs.)	98,684	$16,973

STATISTICS OF CALAVERAS COUNTY, 1905-6—Continued.

Dairy Industry.

	Production.	Value.
Creameries, 2.		
Butter (pounds)	55,900	$16,770
Cheese (pounds)	2,300	285
Cream (gallons)	2,100	2,940

Poultry and Eggs.

	Dozen.	Value.
Chickens	3,637	$21,822
Ducks	37	222
Geese	26	182
Turkeys	340	8,500
Eggs	351,585	87,896
Total value		$118,622

Forest Products.

	Amount.	Value.
Area of timber lands (acres)	160,000	-------
Sawmills (number)	8	$75,000
Charcoal (sacks)	6,300	1,890
Fuel, wood (cords)	12,603	53,512
Lumber—Pine (feet)	6,000,000	120,000
Pickets (pieces)	50,000	1,750
Posts (pieces)	17,510	1,760
Shakes	200,000	10,000
Total value		$283,912

Power used for mills and manufactories in county: Steam—number, 17; electrical—number, 9; water—number, 18.

Miscellaneous Products.

	Pounds.	Value.
Bees (hives)—No., 248	------	$864
Beeswax	15	4
Honey	5,440	1,360

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value of Product.
Carriages and wagons	3	10	85	$18,000
Cigars	1	1	60,000	2,500
Foundries and iron works	1	35	------	75,000
Meat products—				
Hides (lbs.)		----	213,260	139,176
Lard (lbs.)		----	46,676	5,654
Tallow (bbls.)		----	275	1,807
Olive oil (gals.)		----	2,000	4,000
Pickles (gals.)		----	9,706	4,853
Planing mills		8	------	------
Ice plants	5	10	------	------

COLUSA COUNTY.

Colusa County, when a few years ago it included what is now known as Glenn County, was the banner county for wheat-raising. As it is, it still raises large crops of wheat and barley; but as continued grain-raising finally exhausts the soil, the farmers are at last face to face with the fact that the soil is becoming exhausted for grain and needs a rotation of crops. Fortunately there is one thing that will replenish the soil with nitrogen and restore all its wasted vigor, namely: alfalfa. Attention is therefore being attracted to irrigation, and several canals are already in existence, with more to follow in the next few years.

Colusa County is situated in a direct line northerly from San Francisco, the southern line of the county being about one hundred miles from the metropolis. The Sacramento River flows through the entire length of the county and will be the source from which prosperity will spring, for its supply of water is abundant enough to irrigate every acre of land, not only in this county but in the Sacramento Valley.

Thus far the land has been owned by a few people and the small farmer could not compete in grain-raising; nor did the big owner fare as well as he might have done on a very much smaller tract devoted to diversified, if not intensive farming. Gradually some of these enormous tracts are coming on the market, and it is only a question of time until Colusa County will exhibit a sadly belated, but vigorous boom.

The soil is a rich alluvium, on which almost anything grows to perfection. Alfalfa grows like weeds and six crops in one year is nothing unusual.

The ground in several parts of the county is admirably adapted to raisin grapes, even without irrigation; and lands to be had at $60 an acre are this season netting around $160 per acre. Planting and cultivation for three years, until the grapes come into bearing, cost about $40 an acre. These flattering results are inducing new vineyards to be put out, especially in the southern half of the county around College City, Arbuckle, and Williams.

Colusa County oranges command a premium at the best hotels in San Francisco, and at the Midwinter Fair there took first prize. While this industry is only in its infancy, it is growing with rapid strides.

Next to grapes, the largest fruit crop is prunes, and no other part of the State can grow a better prune than does Colusa County.

Dairying is also on the increase, being a well-paying undertaking. The county seat has a creamery, run on the coöperative plan.

Besides the many opportunities in agriculture and viticulture, Colusa County in its western part contains the famous Colusa sandstone quarries. This sandstone stood the test of the San Francisco fire better than any other stone. (See the Kohl building, Flood building, Ferry building, and others.) There are also deposits of gold, copper, cinnabar, and chromic iron, as well as quicksilver, salt, and rubble.

Cook's Springs, and its celebrated Cook's mineral water, Fout's Springs, and others add to the wonderful variety of resources of this highly blessed part of California.

Fish abounds in the river, and geese and ducks are so abundant in winter that it would be dangerous to express it in figures.

The average rainfall is 20 inches, coming between November and April, and insuring cereal and grape results without irrigation.

Besides the Sacramento River, there is Stony Creek, which is to be the source of supply for the proposed national irrigation scheme called the "Orland project."

Climatically Colusa County is highly favored. Sheltered from sea fogs, the number of sunshiny days (almost continuous in one stretch) foots up over two hundred. While the summers are hot during the middle of the day, it is a dry heat which one does not feel nearly as much as a twenty degrees lower temperature in damper climes. Labor can be pursued without hindrance even during the hottest days, and the cool nights are bracing and invigorating. As to the winters, the fact of successful orange culture speaks more strongly than any thermometer readings could.

With a population of about 15,000 on an area big enough to support 600,000, Colusa's future importance is bound to become manifest. Compared with the size of Belgium for instance, Colusa County could easily support 600,000 people, if populated as thickly as is the kingdom of Belgium. In fact, that kingdom does not have as large an arable percentage of land as has Colusa County.

In the foothills to the west lies land admirably adapted to apple-growing. This year an orchardist near Sites took 670 pounds of Ben Davis apples from one of his oldest trees, or over $20 worth. The largest of these apples measured 13 inches around and 4 inches high.

STATISTICS OF COLUSA COUNTY, 1905-6.

General Statistics.

Area, 1,080 square miles, or 691,200 acres.	
Number of farms	690
Number of acres assessed	609,596
Value of country real estate	$8,605,316
Of improvements thereon	$593,495
Of city and town lots	$286,380
Of improvements thereon	$662,220
Of personal property	$1,398,402
Total value of all property	$11,545,813
Expended on roads, last fiscal yr.	$30,466
Expended for bridges, last fiscal year	$6,894
Number of miles of public roads	1,255
Road levy per $100, 1906	35 cts.
Value of county buildings	$100,000
Irrigating ditches—miles, 12; cost	$2,300
Railroads, steam—miles, 55.93; assessed value	$602,794
Electric power plants—1; assessed value	$3,500
Electric power lines—miles, 16; assessed value	$1,280
Number of acres irrigated	582

Fish Industry.

	Pounds.	Value.
Black bass	16,091	$1,609

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Asparagus	60,000	$3,000
Blackberries	7,000	350
Beets	5,000	100
Cabbage	40,000	600
Celery	20,000	500
Corn	25,000	300
Grape-fruit	1,980,000	9,900
Oranges (boxes)	1,500	3,000
Pears	641,892	6,420
Irish potatoes	137,500	1,375
Sweet potatoes	31,050	465
Tomatoes	102,000	1,530
Total value		$25,540

Dried—	Pounds.	Value.
Almonds	66,800	$8,350
Beans	141,200	4,236
Figs	13,500	540
Onions	160,000	2,000
Prunes	3,078,600	100,035
Raisins	1,790,000	71,600
Walnuts	4,000	500
Totals	5,254,100	$187,261

STATISTICS OF COLUSA COUNTY, 1905-6—Continued.

Cereal Products and Hay.

Tons of 2,000 pounds.

	Tons.	Value.
Wheat	19,051	$400,071
Barley	65,777	1,249,763
Oats	209	4,807
Rye	42	924
Corn	1,931	38,620
Total cereals	87,010	$1,694,185
Alfalfa hay	2,125	$12,750
Grain hay	27,600	220,800
Grass hay	300	1,200
Total hay	30,025	$234,750

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	6,820	990	7,810
Apricot	18,900	2,000	20,900
Cherry	1,050	350	1,400
Fig	3,875	2,075	5,950
Lemon	550	200	750
Olive	4,000	2,395	6,395
Orange	4,550	2,275	6,825
Peach	10,100	3,975	14,075
Pear	9,875	1,965	11,840
Prune	78,000	3,081	81,081
Almond	23,320	5,120	28,440
Walnut	2,150	1,200	3,350
Total fruit trees	163,190	25,626	188,816
Raisin grapes (acres.)	410	20	430
Table grapes (acres.)	---	----	40
Wine grapes (acres.)	---	----	50
Total acres grapes	410	20	520
Blackberries (acs.)	20	----	20
Loganberries (acs.)	10	----	10
Total acres berries	30	----	30

Livestock Industry.

	Number.	Value.
Cattle—Beef	2,125	$53,125
Stock	20,600	257,500
Dairy Cows—Graded	2,640	79,200
Calves	5,772	57,720
Swine	23,675	94,700
Horses—Thoroughbred	3	750
Common	3,593	107,790
Colts	1,164	23,280
Mules	3,871	232,260
Sheep—Common	47,600	95,200
Lambs	19,300	24,125
Angora Goats	5,000	10,000
Total stock all kinds	135,343	$1,035,650
Wool (pounds)	476,300	$71,445
Mohair (pounds)	20,000	5,000

Dairy Industry.

	No.	Production.	Value.
Creameries (pounds)	1	258,903	$54,956
Skimming stations	4	------	------

Mineral Water.

	Gallons.	Value.
Cook's Mineral Water Co. (18 employés) — cases, 15,327; 50 bottles each	191,587	$61,308

Poultry and Eggs.

	Dozen.	Value.
Chickens	1,830	$9,150
Turkeys	1,540	27,720
Eggs	198,765	35,777
Total value		$72,647

Forest Products.

	Amount.	Value.
Fuel, wood (cords)	922	$5,532
Lumber, pine (feet)	300,000	6,000
Total value		$11,532

Power used for mills and manufactories in county: Steam—number, 2, sawmill and flour mill.

Miscellaneous Products.

	Pounds.	Value.
Bee (hives)—No., 873		$873
Broomcorn	364,000	13,650
Honey	21,815	2,181
Alfalfa seed	60,000	6,000

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value of Product.
Cigars	2	4	210,000	$10,500
Flouring mills (barrels)	1	6	15,000	60,000
Lime (barrels)	--	--	225	506
Hides (pounds)	--	--	2,745	10,980
Lard (pounds)	--	--	72,200	9,025
Tallow (bbls.)	--	--	132	1,650
Sandstone (cubic feet)	2	46	131,484	65,748
Fruit-packing house	1	66	--------	--------

Productions Shipped Out of State.

	Amount.
Barley	59,200 tons
Hay	900 tons
Wheat	17,531 tons
Almonds	36,200 lbs.
Figs, dried	13,500 lbs.
Prunes, dried	3,078,000 lbs.
Raisins	1,790,000 lbs.
Beans, dried	94,132 lbs.
Wool	476,300 lbs.
Rolled barley	800 tons
Wild game—ducks and geese	101,305 lbs.

CONTRA COSTA COUNTY.

Contra Cosa is one of the central counties, its shore line being within 14 miles of San Francisco. It possesses unusually good traveling facilities, both by rail and by steamer. The county has 70 miles of water-front, nearly all of which is upon deep water, navigable by all vessels engaged in commerce. Over three fourths of its area is cultivated, the balance being used for grazing. The only mountain of any size is Mount Diablo, which is 3,896 feet in height and almost in the geographical center of the county.

About two thirds of the area is rolling and hilly. Lying between the hills are some of the most fertile and beautiful valleys in the State, which are drained and watered by many streams, the banks of which are bordered by oak, sycamore, laurel, willow, etc., while the hills are dotted with oaks, many of which are of large size.

The farming lands in the eastern section are between the foothills and the San Joaquin River. The soil is of a rich alluvial nature, and produces wheat, barley, alfalfa, fruit, and vines. To the northward and between the uplands and the San Joaquin River is a body of tule lands, a large portion of which has been reclaimed, and is some of the most productive land in the State, being a rich deposit of sediment and decomposed vegetation. Alfalfa, asparagus, potatoes, beans, etc., are produced on the largest scale on such lands, the asparagus being shipped East by the carload during the early spring.

The average rainfall is from 18 to 23 inches, which is ample for all purposes of agriculture, horticulture, etc.

In depth, the soil throughout the county shows a remarkable continuity of rich alluvial deposits underlaid by limestone or clay. There is an occasional change to a coarse sandy and gravelly heavy loam of black or brown tint. It has great power for enduring drought, and is easy to work, giving large returns. The soil in the uplands is in character similar to that of the lowlands, and being drier, is for some purposes even better.

Irrigation is not required to insure crops; the abundant rainfall, the absence of evaporating heat, and the moisture-laden breezes from the ocean furnish abundant humidity for all forms of vegetable life without recourse to artificial irrigation.

The many beautiful valleys and the rolling hills are strikingly similar in general characteristics to the gentle slopes of sunny France. Scattered in all directions are numerous small vineyards and orchards that produce rich results. Fruit-growing has proved successful and remunerative.

Grain-raising is very prominent in this county. A very large acreage is planted to wheat, oats, barley, and hay.

The raising of sugar-beets is a growing industry.

Vegetables of all kinds are raised very profitably and on an extensive scale; one very large tract of land is used entirely for the production of asparagus for early Eastern shipment. Potatoes, beans, etc., are also a prolific and profitable crop, especially in the central portion.

Natural feed is abundant, both on the hillsides and at a higher elevation.

Stock-raising is a leading industry, as the reclaimed lowlands for summer grazing and the rolling hills for winter, close together, create conditions whereby a failure is impossible. The stock farms have produced some of the most famous trotting and pacing horses. In addition to the raising of horses, much attention is given to blooded cattle, sheep, and hogs.

Large dairies are conducted, and in the western end the product mostly shipped to the cities is milk, while in the central and eastern parts butter is the main production. Low freight and express rates give unusual advantages.

Contra Costa County is well adapted to poultry-raising. Feed can be obtained cheaper than in other sections where the industry is thriving. The central part of the county is only a few hours' drive from Oakland and suburbs. The demand for eggs is always greater than the supply.

The only important mining industry is the coal mines of Mount Diablo, although some little mining for precious metals has been done.

The terminus of the Santa Fé railroad is located at Point Richmond, and many substantial improvements in the way of wharves, etc., on a very extensive plan, have been constructed.

Port Costa, the shipping point for the bulk of the grain raised in California, has extensive warehouses.

At Pinole are located large stockyards; near Vallejo Junction is the largest smelting works in the State; at Vallona are extensive lumber yards, where ships from Oregon and Puget Sound discharge. At Crockett are flouring-mills; also agricultural works.

STATISTICS OF CONTRA COSTA COUNTY, 1905-6.

General Statistics.

Area, 877 square miles, or 561,280 acres.	
Number of farms	1,592
Number of acres assessed	561,267
Value of country real estate	$10,202,010
Of improvements thereon	$3,043,685
Of city and town lots	$2,078,325
Of improvements thereon	$1,515,040
Of personal property	$4,751,785
Total value of all property	$21,590,845
Expended on roads, last fiscal yr.	$64,229
Expended for bridges, last fiscal year	$2,301
Road levy per $100, 1906	35 cts.
Value of county buildings	$425,000
Railroads, steam—miles, 141.33; assessed value	$2,255,581
Electric power plants—5; assessed value	$34,500
Electric power lines—miles, 96; assessed value	$38,750
Number of acres irrigated	10,000

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	32,790	------	--------
Barley	44,860	------	--------
Oats	17,032	------	--------
Corn	5,000	------	--------
Hay	124,190	274,580	$2,454,150

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	18,195	10,000	28,195
Apricot	69,000	15,200	84,200
Cherry	24,300	9,035	33,335
Fig	3,060	1,100	4,160
Lemon	600	150	750
Nectarine	350	85	435
Olive	28,215	5,120	33,335
Orange	3,050	250	3,300
Peach	35,685	13,000	48,685
Pear	110,000	12,000	122,000
Plum	23,730	1,115	34,845
Prune	69,230	13,055	82,285
Quince	3,000	1,080	4,080
Other kinds	20,095	5,075	25,170
Almond	216,275	101,830	318,105
Chestnut	150	------	150
Pecan	600	------	600
Walnut	15,915	12,990	28,905
Raisin grapes (acres.)	350	150	500
Table grapes (acres.)	2,365	1,100	3,465
Wine grapes (acres.)	6,080	2,500	8,580
Blackberries (acres.)	60	------	60
Currants (acres.)	40	------	40
Gooseberries (acres.)	20	------	20
Loganberries (acres.)	9	------	9
Raspberries (acres.)	10	------	10
Strawberries (acres.)	60	------	60

STATISTICS OF CONTRA COSTA COUNTY, 1905-6—Continued.

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	345,600	$5,160
Apricots	320,660	12,429
Asparagus	550,000	11,000
Blackberries	56,000	10,000
Beans	26,000	1,100
Beets	35,000	150
Cabbage	150,000	850
Celery	500,000	9,000
Corn	61,729	650
Currants	10,000	325
Cherries	120,000	12,000
Figs	20,025	450
Gooseberries	2,100	50
Grapes	28,090,000	385,150
Grape-fruit	1,100	50
Lemons (boxes)	250	460
Loganberries	1,700	95
Onions	1,200,000	6,000
Oranges (boxes)	1,100	2,200
Pears	2,450,975	24,575
Peaches	237,850	2,478
Peas	17,000	239
Persimmons	32,000	500
Plums	124,560	1,359
Irish potatoes	55,000,000	29,000
Sweet potatoes	50,140	550
Prunes	271,500	
Quinces	18,610	189
Raspberries	1,700	95
Strawberries	55,000	1,565
Tomatoes	245,250	18,524

Dried—	Pounds.	Value.
Almonds	2,330,400	$256,025
Apples	4,600	285
Beans	650,000	18,000
Chestnuts	1,200	100
Corn	210,000	3,500
Figs	3,100	175
Pears	150,550	8,475
Peaches	154,445	12,465
Peanuts	3,500	160
Plums	4,600	190
Prunes	1,364,750	35,895
Raisins	13,000	600
Walnuts	11,000	990

Dairy Industry.

	No.	Production.	Value.
Creameries (lbs.)	35	347,625	$299,166
Butter (pounds)	--	277,000	55,400
Cheese (pounds)	--	123,000	8,364

Poultry and Eggs.

	Dozen.	Value.
Chickens	30,120	$120,480
Ducks	1,325	5,300
Geese	42	620
Turkeys	60	1,800
Eggs	345,000	72,450

Wines, Brandies, Etc.

Number of wineries, 60; number of distilleries, 1; number of breweries, 2,

	Gallons.	Value.
Wine—Angelica	4,000	$2,400
Burgundy	3,000	600
Cabernet	4,500	900
Chateau Iquem	900,000	153,000
Muscatel	5,500	2,250
Port	8,000	4,800
Riesling	8,000	1,375
Sauterne	14,000	3,500
Sherry	9,000	5,400
Tokay	2,000	1,200
Zinfandel	685,000	116,450
Beer (barrels)	7,000	22,750
Brandy	12,000	36,000
Cider	3,000	900

Fish Industry.

	Pounds.	Value.
Salmon	798,235	$31,929
Other kinds	682,340	34,117

Livestock Industry.

	Number.	Value.
Cattle—Beef	4,960	$199,000
Stock	19,550	925,600
Thoroughbred	690	35,000
Dairy Cows—Graded	8,938	265,140
Angus	25	1,850
Ayrshire	50	3,300
Devon	275	22,600
Guernsey	160	13,000
Herefords	475	35,175
Holsteins	785	77,350
Jersey	700	69,500
Shorthorns	582	40,740
Calves	3,460	28,600
Swine	16,487	115,409
Horses—		
Thoroughbred	173	86,500
Standard-bred	829	145,900
Common	7,942	549,409
Colts	1,900	73,000
Mules	403	11,960
Sheep—		
Imported or fine	490	3,022
Common	5,895	20,368
Lambs	4,562	5,286
Common Goats	404	805
Wool (pounds)	40,000	7,170

Miscellaneous Products.

	Pounds.	Value.
Bees (hives) No., 900	------	$2,700
Flowers and plants (acres)	200	12,000
Honey	10,000	800
Alfalfa seed	2,500	275
Garden seed	125,000	7,500

Contra Costa County reports an output of 4,200 cords of wood, worth $37,800; and 410,000 barrels of lime, valued at $8,200.

DEL NORTE COUNTY.

Del Norte, as its name implies, is at the far north. It is situated in the northwest corner of the State. A county of scenery unsurpassed in its grandeur, its vast redwood forests, its clear winding streams, its green fertile fields, its giant redwoods, its mountains laden with precious ores, and its rich dairy lands make it one of the most desirable places for the home-seeker.

Chief among Del Norte's industries is the dairying interest. Scattered throughout the coast portion are modern, well-equipped creameries where the product of thousands of cows is turned into butter. This industry, with the coming of better facilities for shipment, will place Del Norte in the foremost rank as a butter-producing county. Farming is carried on to a considerable extent. A large portion of the soil is especially adapted to the culture of the apple, there being a total absence of the codling-moth pest. Pears, plums, cherries, and small fruits and berries of every description bear luxuriantly. On the Klamath River, in the southern part of the county, as well as on the Smith River, in the northern part, large, well-equipped salmon canneries are operated with great success. The center of trade lies in Crescent City, the county seat, nestled on a crescent-shaped beach, where the products of the county come for shipment, generally finding their market in San Francisco, the products in the main being lumber, butter, and from the farm.

Smith River is a small town in the center of the beautiful valley of the Smith River, where such business is carried on as is usually conducted in a farm and dairy district.

Requa, a small town near the mouth of the Klamath River, is a trading post for that district.

The arable portion of the county is confined generally to the coast portion, commencing at its northern boundary and extending through its entire length, excepting a few miles to the southward of Crescent City. The arable land may be divided into three classes: First, that formed by the disintegration of sands, which with the aid of fertilization and rotation produces good crops, and is especially adapted to the growth of apples, an industry yet in its infancy. Second, those lands formed by the constant washing of rich vegetable matter and the detritus carried by streams from the mountainsides and distributed in the valleys to a great depth, known as sediment lands. Third, marsh or lake lands, a large area of which borders on Lake Earl, at times partly inundated by the overflow of the lake, but which by a system of reclamation will constitute the most valuable land in the county for dairying purposes.

The redwood timber belt, comprising 200,000 acres, commences at the north boundary line and extends in an unbroken forest to the southern boundary of the county. It can be reasonably said that no grander or finer forest exists in the world. Its immensity can be better imagined

when it is stated that a single tree yields sufficient clear lumber to build a modern cottage and finish it from cellar to garret, or more particularly, when it is stated that from a tract consisting of 160 acres there have been taken 27,802,121 feet, or an average of 173,763 feet per acre. East of the redwood belt are large tracts of sugar pine and fir.

Deposits of valuable ore lie in the hills of Del Norte, but not until recent years have those with means to develop mines turned their attention to this county.

Covering the entire expanse of coast line from Humboldt Bay to the Columbia River, the roadstead at Crescent City is the only point affording opportunity for a haven of refuge, and with assistance from the United States Government in the construction of a seawall from the United States lighthouse, to the westward of Crescent City, to an outlying rock, a distance of 2,000 feet, Crescent City harbor will be made a safe and secure refuge for the innumerable water-craft now plying along the coast. The present shipping is carried on over a wharf or pier, built on wooden piles, extending out to a depth of sixteen feet at low water.

Few counties on the Pacific coast afford a more varied opportunity for the pleasure-seeker, or those in quest of rest and recreation. This point may be reached from Grant's Pass in Oregon, the nearest railroad point, thence by stage road over mountain and through dale, the entire journey replete with grand scenery.

Del Norte County is almost devoid of railroad facilities, there being but fifteen miles in operation. However, the wonderful resources of the county have attracted the attention of the railroad corporations, and they have made a survey from the Southern Pacific system in Grant's Pass, Oregon, to Crescent City, this being the only natural pass from the great valleys of the interior to the coast.

STATISTICS OF DEL NORTE COUNTY, 1905-6.

General Statistics.

Area, 1,546 square miles, or 989,000 acres.	
Number of farms	745
Number of acres assessed	214,906
Value of country real estate	$2,629,432
Of improvements thereon	$105,641
Of city and town lots	$82,805
Of improvements thereon	$116,120
Of personal property	$334,588
Total value of all property	$3,273,445
Expended on roads, last fiscal yr.	$8,160
Expended for bridges, last fiscal year	$4,165
Number of miles of public roads	135
Road levy per $100, 1906	30 cts.
Value of county buildings	$21,000
Railroads, steam—miles, 14; assessed value	$20,000
Electric power plants, 1; assessed value	$5,000
No irrigation; annual average precipitation	80 inches

Poultry and Eggs.

	Dozen.	Value.
Chickens	400	$1,400
Eggs	500	125
Total value		$1,525

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	3,500	500	4,000
Apricot	200	----	200
Cherry	250	----	250
Peach	300	----	300
Pear	150	----	150
Plum	500	----	500
Prune	250	----	250
Other kinds	1,000	----	1,000
Total fruit trees	6,050	500	6,550
Raisin grapes(acres)	2	----	2
Blackberries (acres)	5	----	5
Currants (acres)	2	----	2
Raspberries (acres)	5	----	5
Strawberries (acres)	7	----	7
Total acres berries	19	----	19

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	------	$2,000
Irish potatoes	300,000	1,500
Strawberries	3,750	650
Totals	303,750	$4,150

STATISTICS OF DEL NORTE COUNTY, 1905-6—Continued.

Cereal Products and Hay.

	Acres.	Tons. (Tons of 2,000 pounds.)	Value.
Wheat	25	24	$864
Barley	300	262	7,860
Oats	1,500	1,220	36,600
Total cereals	1,825	1,506	$45,324
Grain hay	1,000	2,000	$20,000
Grass hay	1,000	1,500	15,000
Total hay	2,000	3,500	$35,000

Livestock Industry.

	Number.	Value.
Cattle—Beef	500	$12,500
Stock	750	6,750
Thoroughbred	100	5,000
Dairy Cows—Graded	3,500	45,000
Calves	1,000	5,000
Swine	1,000	3,000
Horses—		
Thoroughbred	5	1,000
Standard-bred	10	2,000
Common	350	15,000
Colts	100	3,000
Sheep—Common	1,500	4,000
Lambs	500	1,000
Angora Goats	250	2,500
Wool (pounds)	20,000	4,000
Mohair (pounds)	2,500	800

Dairy Industry.

	No.	Production.	Value.
Creameries	8	------	------
Butter	--	------	1,575,000

Fish Industry.

	Value.
Salmon—4,000 cases (48 lbs. to case)	$20,000
Barreled ..... 350 barrels	3,500
Fresh Salmon ..... 50 tons	2,500
Total value	$26,000

Forest Products.

	Amount.	Value.
Area of timber lands (acres.)	146,000	From $10 to $150 per acre, according to location and kind of timber.
Cedar (acres.)	16,000	
Pine (acres.)	30,000	
Redwood (acres.)	100,000	
Sawmills (number)	2	$150,000
Lumber—Cedar (feet)	100,000	9,000
Pine (feet)	5,000,000	25,000
Redwood (feet)	24,000,000	360,000
Pickets (pieces)	1,000,000	10,000
Shingles	8,000,000	10,000

Manufactories.

	Quantity Produced.	Value of Product
Hides	40 tons	$6,200
Lard	7½ tons	1,050
Meat packed	100 tons	24,000
Veal	16 tons	1,920

EL DORADO COUNTY.

El Dorado, the "Old Empire county," is situated about the middle of the eastern tier of counties. It is a county of hills and valleys, extending from the low foothills in the west to the summit of the Sierras in the east. There are no broad tracts of prairie land, nor great plateaus. The soil is fertile, and supports a large variety of agricultural and horticultural products. Large forests of the finest sugar and yellow pine, fir, and spruce cover the mountains. Fruit-raising, lumbering, stock-raising, dairying, poultry-raising, bee-culture, farming, slate-quarrying, mining for base and precious metals, and the manufacture of wines and brandy are among the industries.

That famous summer resort, Lake Tahoe, is partly included within the boundaries of the county, and a number of other summer resorts have their pleasure-seekers every summer. Tourists and campers find the mountains of this county an ideal place to spend their time.

Placerville, the "Hangtown" of early days, is the county seat. It is on the western slope of the Sierra Nevadas, at an altitude of about 1,800 feet, and was, till a short time ago, the terminus of a branch of the Southern Pacific system. It has a good grammar school, and a new county high school. Religious denominations are well represented. Business and residence places are lighted by electricity from the American River Electric Power Company, whose plant is on the South Fork of the American River, about four miles from town.

Fruit-growing is one of the oldest industries, and as it has been systematized during late years, promises to be of more importance in the future. Apples, peaches, pears, plums, prunes, and grapes are grown, and owing to their superior flavor and splendid shipping qualities find a ready market in the East. With the climate and soil and irrigating facilities, this industry will become one of El Dorado's best.

The water supply is sufficient for all needs. There are several ditch systems that bring water from the snows of the Sierras. Besides these there are many smaller systems that distribute water to all parts of the county.

The Sacramento and Placerville Railroad has been extended by the El Dorado Lumber Company to the new town of Camino, where there is located a box factory and the company's planing mill, lumber yards, and dry kiln. From this point the company's narrow-gauge road runs into the lumber belt. The Caldor and Diamond Railroad is a lumber road, and runs from Diamond Springs into the timber belt.

It was at Coloma that James W. Marshall, in January, 1848, made his famous discovery of gold. Since then mining has been one of the leading of El Dorado's industries. Cinnabar and copper are found in several localities, and in several places prospects of the latter metal are being developed.

Slate-quarrying is an important and rapidly growing industry. The manufacture of slate for roofing and other purposes is conducted on a

large scale. The quarries at Slatington are being extended, as the capacity of the plant is not equal to the demand. The quality of the slate is equal to the best produced in the East.

Limestone and marble of good quality are found, and a large quantity of lime is manufactured.

The ranges in the mountains are ideal pastures, and thousands of cattle spend the summer there, migrating in the winter to the lower country till the snows of the high altitudes have melted and the feed started again. Dairymen go with their herds, and all summer the dairy products are sent out of the hills.

With the abundant rainfall irrigation is not necessary in most sections, though irrigation increases the productive capacity of the land.

STATISTICS OF EL DORADO COUNTY, 1905-06.

General Statistics.

Area, 1,796 square miles, or 1,049,440 acres.	
Number of farms	1,600
Number of acres assessed	667,945
Value of country real estate	$2,282,280
Of improvements thereon	$724,090
Of city and town lots	$164,905
Of improvements thereon	$479,350
Of personal property	$654,005
Total value of all property	$5,085,925
Expended on roads, last fiscal year	$13,285
Expended for bridges, last fiscal year	$2,765
Number of miles of public roads	700
Road levy per $100, 1906	36 cts.
Value of county buildings	$85,000
Irrigating ditches—miles, 352; cost	$113,655
Railroads, steam—miles, 81; assessed value	$616,085
Electric power plants, 1.	
Electric power lines—miles, 80; assessed value	$103,520
Number of acres irrigated	15,000

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	4,600	3,000	7,600
Apricot	900	450	1,350
Cherry	3,150	375	3,525
Fig	1,500	400	1,900
Nectarine	1,500	600	2,100
Olive	5,000	800	5,800
Orange	1,000	----	1,000
Peach	116,000	15,000	131,000
Pear	6,500	25,000	31,500
Plum	2,500	600	3,100
Prune	15,000	2,000	17,000
Quince	200	----	200
Other kinds	18,000	3,000	21,000
Almond	2,600	1,200	3,800
Chestnut	150	50	200
Walnut	550	700	1,250
Total fruit trees	179,150	53,175	232,325
Raisin grapes (acres.)	175	----	175
Table grapes (acres.)	385	60	445
Wine grapes (acres.)	2,150	500	2,650
Total acres grapes	2,710	560	3,270

Fruit Trees and Vines—Continued.

	Bearing.	Non-Bearing.	Total.
Blackberries (acres.)	8	3	11
Currants (acres.)	3	--	3
Loganberries (acres.)	5	3	8
Raspberries (acres.)	3	1	4
Strawberries (acres.)	4	2	6
Total acres berries	23	9	32

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	137,500	$2,000
Blackberries	1,800	200
Cabbage	8,000	125
Currants	1,600	160
Cherries	16,000	480
Figs	8,000	240
Grapes	200,000	3,500
Loganberries	2,000	150
Onions	60,000	600
Pears	500,000	7,500
Peaches	192,000	5,760
Plums	447,000	6,720
Irish potatoes	300,000	4,500
Prunes	520,000	13,000
Tomatoes	280,000	2,800
Totals	2,673,900	$47,735

Dried—	Pounds.	Value.
Apples	3,200	$160
Figs	3,000	150
Pears	25,000	1,500
Peaches	4,000	360
Plums	12,000	840
Prunes	200,000	4,000
Walnuts	3,000	360
Totals	250,000	$7,370

Owing to late spring rains and shortage of peach and general fruit crop, there was no fruit canned, but all was shipped fresh or dried.

Wines, Brandies, Etc.

Number of breweries, 1.

	Amount	Value.
Beer (barrels)	1,500	$14,850
Vinegar (gallons)	20,000	3,000

STATISTICS OF EL DORADO COUNTY, 1905-6—Continued.

Cereal Products and Hay.

	Acres.	Tons of 2,000 pounds. Tons.	Value.
Wheat	425	100	$3,000
Grain hay	----	20,000	$240,000
Grass hay	----	800	5,600
Total hay		20,800	$245,600

Livestock Industry.

	Number.	Value.
Cattle—Beef	1,000	$20,000
Stock	7,000	107,000
Calves	2,560	25,640
Swine	700	4,200
Horses—		
Standard-bred	30	1,200
Common	2,500	60,000
Colts	500	5,000
Mules	50	1,500
Sheep—Common	1,200	3,000
Common Goats	800	1,600
Total stock all kinds	16,340	$229,140

Forest Products.

	Amount.	Value.
Area of timber lands (acres)	250,000	
Pine (acres)	250,000	$2,000,000
Sawmills (number)	6	100,000
Charcoal (sacks)	500	250
Fuel, wood (cords)	3,500	8,750
Laths	20,000	75
Lumber—Pine (feet)	80,000,000	800,000
Piles (number)	3,000	10,000
Posts (pieces)	10,000	1,000
Sash and door factories (number)	1	7,500
Shakes	1,000,000	6,000
Stave bolts (cords)	15	75
Total value		$2,933,650

Dairy Industry.

	Pounds.	Value.
Butter	200,000	$4,500

Poultry and Eggs.

	Dozen.	Value.
Chickens	1,200	$7,200
Ducks	50	250
Turkeys	50	1,200
Eggs	300,000	4,500
Total value		$13,150

Mineral Products.

	Pounds.	Value.
Asbestos	------	$2,625
Copper	160,000	24,960
Gold	------	384,735
Limestone	21,000	5,775
Silver	------	2,525
Slate	------	40,000

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value of Product.
Cigars	2	6	300,000	$12,000
Confectionery (pounds)	1	5	14,000	4,000
Foundries and iron works (tons)	2	20	90	8,500
Lime (barrels)	----		9,260	6,946
Hides	----		----	2,400
Lard (pounds)	----		3,000	300
Tallow (barrels)	----		100	400
Olive oil	----		----	1,600
Planing mills	2	20	---	18,000

Productions Shipped Out of State.

	Amount.
Grapes, fresh	4,800 pounds
Pears, fresh	8,640 boxes
Plums, fresh	19,200 boxes

FRESNO COUNTY.

Fresno extends across from the high Sierras to the mountains of the Coast Range, and in this center of the valley every form of industry in any of the counties that make the watershed of the San Joaquin is found in a greater or less degree.

Its mountains contain lumber and minerals and fine scenery; its level plains grow cereals and fruits, and vines and vegetables; it raises cattle, and its western borders overflow with petroleum. But in addition to this diversity of interests, it has, as a great mainstay, the raisin industry, with Spain as its only competitor.

The average rainfall is 10 inches. Fresno is a wonderful example of what irrigation has done and can do. The San Joaquin River forms the northern and eastern boundary line, but the stream is not so well located for irrigation purposes as is Kings River, which, rising in the Sierras, passes south, and then west and north, in a wide curve, through the center of the farming district, carrying through the summer a volume of water equal to 8,500 cubic feet per second.

The region is a network of streams of water, that is drawn off on the vineyards, deciduous or citrus fruit orchards, or alfalfa fields. The cost of water is low. The perpetual water right, included with the purchase price of the land, is about $6.25 per acre.

Though great as the raisin and fruit industry is, wheat is grown on vast areas, the ranches running in the thousands of acres and the product in good years amounting to millions of bushels, a considerable portion being worked into flour in Fresno. Barley is grown in large quantities, and so is alfalfa. There are creameries and skimming stations, and butter and cheese are exported. An unlimited market for dairy products, with the fact that one acre of alfalfa will keep one cow in green feed, offers the farmer of limited means an opening for immediate and profitable returns. Sheep by the thousands roam over the foothills.

Deciduous fruit shipments, green and dried, represent several million dollars. Citrus fruit growing is a developing industry. Watermelons are exported in hundreds of carloads. The vineyards cover thousands of acres, most of which are in raisin grapes, and the remainder in wine or table varieties. There are many large wineries. Excellent port, brandy, sherry, and angelica are made, as well as other varieties.

At the head of the long list of valuable products stands the raisin. When a vineyard is in full bearing it produces about 4,000 pounds of green grapes to the acre, which will dry to over one ton of raisins. The average product of five-year-old vineyards is a ton of raisins to the acre. The California raisin has possession of the American market, and is extensively shipped abroad.

The growing of nursery stock is a remunerative occupation. Honey is produced in considerable quantity, and more so with the increased production of alfalfa. Alfalfa honey equals in quality clover honey of

the East. Gold is mined in the mountains, and millions of feet of lumber cut annually, most of which is floated down in flumes. There are large planing mills and many lumber yards in the City of Fresno.

The growth of the dairy business dates back less than six years, when smaller interests merged and became what may be properly called a large clearing-house for butter-fat. Before this, dairying was conducted in a desultory way by ranchmen who gave their time to grain, vineyards, or other possessions, and, these permitting, the cows received attention later on. Now the farmers find it advisable to attend to their cows.

The calves and hogs fed on the skimmed milk are as much a part of the dairy product as the cream itself.

Along the river bottoms of the Kings and San Joaquin sheep-raising flourishes. Here, between October and April, scores of bands of sheep are herded every year. The section is fertile and rich in herbage, upon which the animals thrive until the dry season sets in, when they are driven into the mountains.

The raising of hogs, cattle, horses, and mules has advanced both as to numbers and as to quality in breeding. Large numbers of cattle are being received continually from Arizona, to be fattened and either slaughtered here or reshipped to San Francisco and elsewhere.

Thoroughbred, standard-bred, and high-class draft stallions have been brought into the county, and great interest is manifested among horsemen in raising the grade of the runner, the trotter, and the work horse. Some of the best roadsters in the State are in Fresno, and very promising youngsters in the running line are also attracting attention, while the production of the heavier breeds has met with equal success.

In a general mention of the varied resources there must be consideration of the mule. In this valley he finds an environment peculiarly adapted to his exacting requirements, and speedily attains the highest degree of mulish perfection.

STATISTICS OF FRESNO COUNTY, 1905-6.

General Statistics.

Area, 5,606 square miles, or 3,587,840 acres.	
Number of farms	15,000
Number of acres assessed	1,963,254
Value of country real estate	$18,256,345
Of improvements thereon	$3,655,452
Of city and town lots	$4,359,426
Of improvements thereon	$4,450,773
Of personal property	$5,409,366
Total value of all property	$36,131,362
Expended on roads, last fiscal yr.	$65,332
Expended for bridges, last fiscal year	$24,500
Number of miles of public roads	2,000
Road levy per $100, 1906	40 cts.
Value of county buildings	$500,000
Irrigating ditches—miles, 2,500; cost	$2,500,000
Railroads, steam—miles, 261.92; assessed value	$3,677,082
Railroads, electric—miles, 16¼; assessed value	$31,750
Electric power plants (in city), assessed value	$14,500
Electric power lines—	
In city—assessed value	$11,000
Outside—assessed value	$29,228
Number of acres irrigated	709,920

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	20,000	10,000	$2,200,000
Barley	15,000	5,000	750,000
Corn	4,000	3,500	87,500
Total cereals	39,000	18,500	$3,037,500
Alfalfa hay	65,000	20,000	$1,200,000
Grain hay	20,500	20,000	200,000
Total hay	85,500	40,000	$1,400,000

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	3,500	1,850	5,350
Apricot	15,000	10,000	25,000
Fig	75,000	50,000	125,000
Lemon	8,000	8,000	16,000
Nectarine	15,000	40,000	55,000
Olive	30,500	5,000	35,500
Orange	60,000	20,000	80,000
Peach	150,000	90,000	240,000
Pear	14,000	3,000	17,000
Plum	4,000	----	4,000

STATISTICS OF FRESNO COUNTY, 1905-6—Continued.

Fruit Trees and Vines—Continued.

		Bearing.	Non-Bearing.	Total.
Prune		10,000	9,000	19,000
Almond		5,000	500	5,500
Walnut		225	50	275
Total fruit trees		----	----	627,725
Raisin grapes	acres.	50,500	5,000	55,500
Table grapes	acres.	3,000	500	3,500
Wine grapes	acres.	9,000	3,000	12,000
Total acres grapes		----	----	71,000
Blackberries	acres.	50	----	50
Loganberries and Raspberries	acres.	30	----	30
Total acres berries		80	----	80

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	250,000	$5,000
Apricots	150,000	3,000
Blackberries	70,000	4,900
Beans	1,500,000	32,240
Corn	700,000	7,000
Nectarines	45,000	775
Oranges (boxes)	50,000	37,500
Pears	100,000	20,000
Peaches	6,000,000	90,000
Plums	90,000	1,200
Irish potatoes	1,500,000	45,000
Sweet potatoes	400,000	12,000
Prunes	5,000	10,000
Raspberries	40,000	3,600
Total value		$272,215

Watermelons, 250 cars.

Dried—	Pounds.	Value.
Apples	5,000	$400
Apricots	1,500,000	90,000
Figs	1,800,000	50,000
Onions	1,250,000	7,500
Peaches	12,000,000	850,000
Prunes	25,000	750
Raisins	60,000,000	3,000,000
Strawberries	60,000	3,000
Walnuts	4,500	450
Total value		$4,002,100

Dairy Industry.

	No.	Production.	Value.
Creameries	4	2,500,000	$750,000
Skimming stations	8		
Cheese (pounds)		6,000	1,200
Cream (gallons)		120,000	12,000

Wines, Brandies, Etc.

Number of wineries, 17; number of distilleries, 10; number of breweries, 1.

	Gallons.	Value.
Wine—All kinds	12,000,000	$2,300,000
Brandy	600,000	250,000

Livestock Industry.

	Number.	Value.
Cattle—Beef	9,000	$270,000
Stock	70,000	1,400,000
Thoroughbred	100	100,000
Dairy Cows—Graded	25,000	1,000,000
Calves	9,000	90,000
Swine	15,000	75,000
Horses—		
Thoroughbred	75	37,500
Standard-bred	70	14,000
Common	15,000	750,000
Colts	1,800	72,000
Mules	3,000	30,000
Total stock all kinds	148,045	$3,838,500
Wool (pounds)	1,500,000	$225,000

Forest Products.

	Amount.	Value.
Area of timber lands (acres)	40,000	$400,000
Sawmills (number)	6	250,000
Pine lumber (feet)	70,000,000	1,400,000
Total value		$2,050,000

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value of Product.
Bookbinderies	2	20	----	$16,000
Brick	2	--	10,000,000	60,000
Cigars	3	20	435,000	22,750
Flouring mills (barrels)	2	40	50,000	200,000
Olive oil (gals.)	-	20	15,000	40,000
Pickled olives (gallons)	-	--	75,000	60,000

Productions Shipped Out of State.

	Amount.
Apples—Dried, 400 cars or	800,000 lbs.
Figs—Dried, 200 cars or	400,000 lbs.
Lemons and oranges—200 cars	72,000 boxes
Nectarines—Dried, 75 cars or	150,000 lbs.

GLENN COUNTY.

This county occupies a position about the center of the Sacramento Valley, extending from east of the river to the summit of the coast mountains, and embracing a great variety of soil, productions, and climate. The elevation of Willows, the county seat, is 136 feet, while the higher peaks of the mountains reach 7,000 feet.

The statistics show the several industries and productions, but the hidden wealth of the western section is being gradually revealed. Material for cement abounds the whole length of the county, as can be seen along Stony Creek. Building-stone is also abundant; a mountian of it extends from the south line of township 18, range 6 west, to the north line of township 20, range 6 west. A vast body of marble approaching alabaster in fineness was recently discovered in township 18, range 6 west. Prospecting for gold in the lower mountain ranges is lively at present, and many assays from ledges develop gold from cents to $55 per ton. Several ledges are being worked, and get better as they go down. With a railroad this western section could supply the Pacific Coast with stone and cement for generations.

An up-to-date sugar refinery began operations this season. This means that much of the wheat land will be put into sugar beets next year. The big wheat ranches are being cut up and sold as there is a demand, and all the new settlers who try diversified farming are meeting with success.

Glenn County is a safe locality for people of small means who are able to do their own work, and for such there is always a welcome. Land values are increasing slowly, but there are bargains to be had every day; prices range from $5 to $100 per acre.

STATISTICS OF GLENN COUNTY, 1905-6.

General Statistics.

Area, 1,460 square miles, or 934,514 acres.

Number of farms	913
Number of acres assessed	639,523
Value of country real estate	$7,823,477
Of improvements thereon	$578,146
Of city and town lots	$166,825
Of improvements thereon	$209,100
Of personal property	$1,163,474
Total value of all property	$9,941,022
Expended on roads, last fiscal yr.	$23,865
Expended for bridges, last fiscal year	$27,991
Number of miles of public roads	414
Road levy per $100, 1906	30 cts.
Value of county buildings	$125,000
Irrigating ditches, cost	$16,800
Railroads, steam—miles, 45.70; assessed value	$743,091
Electric power lines—miles, 32; assessed value	$9,000
Number of acres irrigated	3,490

Dairy Industry.

	No.	Production.	Value
Creameries (lbs.)	2	107,965	$21,485
Butter (pounds)		61,000	10,800

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	35,478	17,384	$347,680
Barley	47,915	23,958	439,344
Oats	725	212	8,650
Rye	4	3	75
Corn	350	212	4,240
Total cereals	84,472	41,943	$799,989
Alfalfa hay	1,685	6,740	$40,440
Grain hay	8,094	8,905	71,240
Total hay	9,779	15,645	$111,680

Miscellaneous Products.

	Pounds.	Value.
Bees (hives)—No., 310	.....	$1,240
Broomcorn	38,000	380
Honey	1,620	162
Alfalfa seed	11,550	1,270
Sugar beets (tons)	65,550	278,587

Glenn County reports two cigar factories, with three employés. The output is 180,000 cigars, worth $7,600.

STATISTICS OF GLENN COUNTY, 1905-6—Continued.

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	2,430	700	3,130
Apricot	3,670	375	4,045
Cherry	350	35	385
Fig	1,500	925	2,425
Lemon	1,500	540	2,040
Nectarine	87	------	87
Olive	1,230	375	1,605
Orange	4,560	1,515	6,075
Peach	4,300	470	4,770
Pear	2,700	220	2,920
Plum	1,350	180	1,530
Prune	6,100	45	6,145
Quince	215	5	220
Almond	5,310	600	5,910
Chestnut	16	------	16
Pecan	45	10	55
Walnut	1,500	480	1,980
Total fruit trees	38,863	6,475	43,338
Table grapes (acres)	45	35	80
Blackberries (acres)	25	5	30
Loganberries (acres)	18	7	25
Raspberries (acres)	20	------	20
Strawberries (acres)	10	3	13
Total acres berries	73	15	88

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	57,320	$570
Apricots	22,020	440
Blackberries	14,000	560
Beans	9,500	285
Corn	68,000	750
Cherries	7,000	350
Figs	75,000	1,125
Grapes	85,000	850
Lemons (boxes)	1,250	3,750
Loganberries	18,000	760
Nectarines	2,150	43
Onions	250,000	2,500
Oranges (boxes)	2,260	5,650
Olives	12,300	369
Pears	136,500	2,730
Peaches	52,400	1,048
Peas	6,400	192
Persimmons	5,800	116
Plums	28,350	566
Irish potatoes	340,000	3,400
Sweet potatoes	38,000	470
Quinces	2,750	55
Raspberries	11,000	550
Strawberries	10,080	504
Tomatoes	150,500	2,257
Total value		$29,890

Dried—	Pounds.	Value.
Almonds	22,000	$2,750
Apples	5,250	420
Prunes	305,000	7,000
Totals	327,250	$10,170

Livestock Industry.

	Number.	Value.
Cattle—Stock	11,961	$179,423
Thoroughbred	18	900
Dairy Cows—Graded	1,214	30,345
Calves	4,507	45,073
Swine	5,424	16,272
Horses—		
Thoroughbred	2	4,500
Standard-bred	36	7,200
Common	2,021	80,655
Colts	556	13,910
Mules	2,805	185,765
Sheep—		
Imported or fine	18	375
Common	44,620	89,240
Angora Goats	6,335	12,670
Total stock all kinds	79,517	$466,328
Wool (pounds)	364,960	$54,075
Mohair (pounds)	44,345	11,084

Poultry and Eggs.

	Dozen.	Value.
Chickens	1,876	$5,628
Ducks	38	152
Geese	4	32
Turkeys	368	7,750
Eggs	69,040	10,356
Total value		$23,918

Forest Products.

	Amount.	Value.
Area of timber lands (acres)	72,092	$350,460
Sawmills (number)	2	7,000
Fuel, wood (cords)	9,130	36,520
Lumber—Pine (feet)	550,000	8,250
Posts (pieces)	3,800	570
Shakes	110,000	770
Total value		$403,570

Power used for mills and manufactories in county—Steam, 2.

Productions Shipped Out of State.

	Amount.
Barley	16,972 tons
Corn	112 tons
Broomcorn	38,000 lbs.
Hay	1,011 tons
Wheat	13,911 tons
Almonds	19,000 lbs.
Cattle	3,670
Hides	825
Horses	210
Sheep	23,500
Swine	4,400
Wool	364,960 lbs.
Butter	42,680 lbs.
Mules	350
Chickens	811 doz.
Turkeys	16,800 lbs.
Eggs	17,235 doz.

HUMBOLDT COUNTY.

Humboldt is, with the exception of Del Norte, the most northerly county of California. The sinuosities of the Pacific coast-line extend some 175 miles. From north to south the county extends 108 miles, while in width it averages about 40 miles.

The topographical features of Humboldt are varied and picturesque. The surface is extremely rugged, numerous spurs of the Coast Range intersecting the county in all directions, rising in many places to absolute grandeur.

Besides a number of smaller streams, the county is drained by two rivers of importance—the Klamath and the Eel.

The soil of the bottom lands and on the hills next the coast is black; that on the bottoms is of a sedimentary composition and somewhat argillaceous, while that on the hills is more of a sandy loam. The soil on the interior hills is composed of disintegrated rock, mixed with organic matter and decayed vegetation.

Humboldt needs no irrigation. The annual rainfall averages 46 inches, and crops have never been known to fail for want of moisture.

Fruit of all kinds does well, particularly apples, pears, prunes, peaches, cherries, apricots, and berries. Strawberries and raspberries grow in abundance, and a small area of land in these fruits, well cultivated, brings a generous return. Raspberries, cherries, strawberries, etc., ripen later than in the warmer sections of the State, thus giving the Humboldt product an advantage in the market.

The yield of all kinds of fruit is generous, and in many instances prodigious, particularly that of apple, plum, and prune trees. Eel River Valley is one of the finest sections on the coast for the production of apples of the most delicate flavor and juiciness. The climate, neither too hot nor too cold, has doubtless much to do with the result.

In the Klamath River country climate and soil are well adapted to horticultural pursuits. Peaches are grown as large as a teacup, and of most luscious flavor. The grapes grown here are of fine flavor and firm flesh. The varieties for table use are particularly good.

Dairying has made remarkable advances in the last two decades. Prior to 1880 it was mainly dependent upon the native grasses of the seaward slope, but with the introduction of clover as the staple food for the herds, a complete revolution occurred, and the establishment of creameries with their improved machinery for handling the milk completed the transformation. There has been great improvement in the herds, which now include the best milk and butter breeds. The output of cheese is nearly all consumed locally. The shipments of condensed milk and cream amount to more than a million pounds annually and butter to half a million pounds. By reason of having green feed at all times, the shipments are continuous throughout the year, thus enabling butter-producers to reap the advantage of high prices at times when

other sections are non-productive. And the cool, equable climate being ideal for butter-making, the quality of the product is superior, and it commands top prices.

Stock-raising is an important industry, as the excellent pasturage furnishes the most favorable conditions. The large ranges in the eastern portion are dotted with countless herds of sheep and cattle, and every farm and dairy in the region nearer the coast adds its quota. Hogs are raised in large numbers, and each creamery has a drove of them being fattened on the skimmed milk and other waste products.

The wool industry is a very important one. In quality Humboldt wool is the choicest on the coast. The stock is good and the wool clean.

Humboldt has the banner record for the production per acre of oats and corn, according to the United States census reports. At the Chicago World's Fair, wheat grown "on the hills" of Humboldt took first prize, and showed the record yield per acre—from 60 to 100 bushels for various samples. All the other crops of temperate climes grow in like proportion. As a rule, any vegetable product that is suitable for cultivation here will grow thriftier, larger, and more to the acre than in almost any other locality. The principal agricultural crops are hay, oats, potatoes, peas, barley, wheat, corn, lentils, seeds, etc. Oat hay is grown universally throughout the county, and is mostly used for local consumption. Oats is the principal grain product. Potatoes are produced largely, and figure among the exports at from 3,000,000 to 5,000,000 pounds annually. Field peas, dried, are an important product. Barley, wheat, corn, lentils, and seeds are regular elements in the products, but occupy a comparatively unimportant place, because the land has been found more valuable for other purposes.

The manufacture of redwood lumber is the most important industry. With a supply of standing timber estimated at over 45,000,000,000 feet, the greater part of which is fairly accessible, the question of a cessation is a matter of remote future consideration. The annual export of lumber of all kinds is above 250,000,000 feet. This is the product of large plants, which are operated nearly continuously. Some smaller plants, limited in capacity, saw almost entirely for the local trade.

Of the subordinate branches of this industry, the most important is the making of shingles. Redwood shingles are a superior article, and in the last few years efforts to introduce them in the Eastern market have been quite successful.

Humboldt County is at present without direct rail connection with the outer world, but this disadvantage is more than made up by its possession of the only safe and commodious harbor, accessible to vessels of all but the deepest draft, between San Francisco and the Columbia River. Humboldt Bay is 14 miles in length and from one-half mile to 4 miles in width. It has a tidal area of 28 miles and 35 lineal miles of navigable channels. It is situated near the center of the coast line of the county, and extends nearly parallel therewith, being separated from the ocean by two narrow peninsulas of sand. Being so completely landlocked, this harbor is of the utmost importance to the coast.

Trinidad, 18 miles north of Humboldt Bay, is a deep open port, well sheltered from all winds except those from the south to the west. Shelter Cove, near the southern boundary of the county, is an open roadstead affording excellent shelter from the northerly winds of summer.

There are lines of railroad, with an aggregate length of 150 miles.

All of them, either directly or through connections, terminate at tide water on Humboldt Bay.

Good wagon roads connect all points of any importance. The road north along the coast gives connection with Crescent City, the county seat of Del Norte County (100 miles north of Eureka), and there are two roads giving overland connection with Mendocino County—one in the interior leads to Willits, the northern terminus of the S. F. & N. P. Railway; the other is along or near the coast.

But little attention has been paid to manufactures aside from that of lumber. There are tanneries. The bark is furnished by the near-by forests.

In 1901 a woolen mill was erected and put in operation at Eureka. It has been very successful; operates steadily, usually on overtime. The larger portion of its product is shipped to the Eastern market.

There is one fruit cannery, and a preserving and canning plant.

There are sash and door factories and planing mills in Eureka, and at Samoa, Arcata, and Fortuna.

At Arcata there is an extensive stave factory which prepares staves and barrel-heads for shipment to San Francisco.

Shipbuilding has for years been a most important industry. A quality of pine excellently adapted to this purpose is plentiful throughout the forest region, and the bay shore offers abundant yard-room for the purpose.

In the northeastern portion, along the Klamath and Trinity rivers, placer mining for gold is the leading industry. While no excessively rich "strikes" have been noted, "pay ground" is unlimited in extent, and water abundant for profitable working.

Granite and sandstone are plentiful for building purposes. Mineral paint has been produced in commercial quantities. Lime is burned at Jacoby Creek. Mineral water is plentiful, and is an article of commercial export. As the result of a prospecting well sunk at Briceland (a small town near Garberville) some years ago, that place has since been lighted and heated by natural gas.

Fishing is quite an important industry, salmon being the principal variety, although halibut, rock-cod, flounders, perch, sea-trout, shad, herring, etc., are plentiful.

The public schools stand high in efficiency. In design and general appearance, the buildings range from the ordinary rural school house to the fine and costly buildings in the towns and cities. They are so distributed over the county as to give practically every one good school facilities.

The United States Government maintains in Eureka a custom house, land office, and weather bureau. On the north spit, near the entrance to Humboldt Bay, is located an efficient life-saving station, and the Government also maintains a system of harbor lights. At Trinidad, on Table Bluff, just south of Humboldt entrance, and at Cape Mendocino, are well-kept lighthouses, the Mendocino light being one of the most important on the coast. At Price Creek, near Grizzly Bluff, a Government fish hatchery is maintained. On both sides of the Trinity River, in the northeastern portion of the county, is the Hoopa Indian Reservation, covering a tract about seven and a half miles square.

Eureka is the county seat and principal business center. It has about three miles of water frontage on Humboldt Bay. Its streets are

broad, well drained and graded, and many of them are graveled, macadamized, or paved with bitumen. There is a sufficient water supply; an excellent volunteer fire department; electric light and power, and gas plants; the usual proportion of schools, churches, and benevolent and secret associations and societies. An electric trolley street railroad, now in operation, is rapidly extending its system to cover all the more important thoroughfares. Ocean-going steamers, local railroads and ferries, the telegraph and telephone, furnish means of communication with the world.

STATISTICS OF HUMBOLDT COUNTY, 1905-6.

General Statistics.

Area 3,507 square miles, or 2,224,480 acres.	
Number of acres assessed	1,538,300
Value of country real estate	$14,464,410
Of improvements thereon	$1,056,995
Of city and town lots	$4,181,265
Of improvements thereon	$2,589,410
Of personal property	$2,711,537
Total value of all property	$25,432,460
Number of miles of public roads	1,150
Road levy per $100, 1906	40 cts.
Value of county buildings	$280,000
Railroads, steam—miles, 124.70; assessed value	$1,005,760
Railroads, electric—miles, 9; assessed value	$48,850
Electric power plants—2; assessed value	$144,692
Electric power lines—miles, 202½; assessed value	$31,000

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Barley	600	600	$15,000
Oats	2,500	1,600	48,000
Total cereals	3,100	2,200	$63,000
Alfalfa hay	175	800	$9,600
Grain hay	5,000	7,000	84,000
Grass hay	10,000	15,000	150,000
Total hay	15,175	22,800	$243,600

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	25,000	3,000	28,000
Cherry	500	------	500
Peach	3,000	------	3,000
Pear	500	------	500
Prune	15,000	------	15,000
Walnut	300	------	300
Total fruit trees	44,300	3,000	47,300

Dairy Industry.

	No.	Production.	Value.
Creameries	35	------	------
Skimming stations	3	------	------
Butter (pounds)	--	6,000,000	$1,500,000
Cheese (pounds)	--	3,000	600
Cond. milk (cases)	--	12,000	54,000
Cond. cream (cases)	--	12,750	50,000

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples, approx.	9,000,000	$125,000
Peas	5,000,000	100,000
Irish potatoes	1,500,000	15,000
Strawberries	75,000	7,500
Totals	16,250,000	$247,500

Wines, Brandies, Etc.

	Amount.	Value.
Beer (barrels)	1,500	$6,000
Cider (gallons)	500	4,000

Fish Industry.

	Pounds.	Value.
Salmon	3,200,000	$62,000

Livestock Industry.

	Number.	Value.
Cattle—Beef	2,662	$56,020
Stock	18,520	191,885
Dairy Cows—Graded	58	2,665
Common	17,010	340,470
Calves	8,912	45,020
Swine	5,046	12,965
Horses—		
Thoroughbred	1	250
Standard-bred	428	25,950
Common	5,305	154,560
Colts	688	14,785
Sheep—		
Imported or fine	1,215	3,175
Common	66,847	100,410
Goats	1,324	2,080
Total stock all kinds	128,016	$950,235
Wool (pounds)	750,000	$165,000

Manufactories—Exports.

Humboldt County reports 2 foundries, but does not give the value of the output; 8 planing mills, which employ 150 hands; 2 tanneries, 1 pottery, and 1 woolen mill. The number of employés and the output of these latter institutions are not given.

The exports are given as 261,320 pounds of butter, 65,300 pounds of salmon, and 316,000,000 feet of lumber.

STATISTICS OF HUMBOLDT COUNTY, 1905-6—Continued.

Poultry and Eggs.

	Dozen.	Value.
Chickens	2,903	$7,250

Forest Products.

		Amount.	Value.
Area of timberlands	acres.	925,000	$9,250,000
Pine	acres.	100,000	1,000,000
Redwood	acres.	825,000	8,250,000
Sawmills		12	1,200,000
Fuel, wood (cords)		15,000	75,000
Lumber—Pine (feet)		2,000,000	60,000
Redwood (feet)		326,000,000	5,860,000
Pickets (pieces)		426,000	6,500

Forest Products—Continued.

	Amount.	Value.
Piles	4,600	$46,000
Posts (pieces)	75,000	7,800
Railroad ties (pieces)	245,000	86,000
Sash and door factories (number)	7	84,000
Shakes (thousand)	23,500	235,000
Shingles (thousand)	813,600	1,220,400
Stave bolts (cords)	6,500	52,000
Total value		$27,432,700

Power used for mills and manufactories in county: Steam—number, 18; electrical—number, 1.

INYO COUNTY.

Inyo, the third largest county, has the most diversified topography in the State, or in fact in the nation, claiming as it does Mount Whitney, the highest elevation, and Death Valley, the lowest depression. The Sierras, which form its western border, here attain their greatest altitude, there being many towering peaks scarcely inferior to Whitney itself. This great natural wall is impassable for ordinary travel, so that the traveler to or from Inyo must pass through western Nevada, if making the trip by rail, or by the southern route stage 120 miles between the railroad at Mojave and that at Keeler, on the shore of Owens Lake.

With exceptions not worthy of note in a brief review, all the agricultural land is contained in Owens Valley. This valley is about 100 miles long; at its northern end it is about 15 miles wide, narrowing to 2 miles halfway down its length, where a spur of the Sierras almost divides it, and south of that broadening to an average of 6 to 8 miles. Of its area of 500,000 acres, the Reclamation Service estimates that 200,000 acres can be made valuable agricultural land. Almost this amount is under claim of some kind, but less than one fourth is cultivated.

The soil of Owens Valley is especially fertile. Fruits attaining maturity are of quality second to none, in either size or flavor. Grains and garden produce of all kinds are grown to perfection.

The honey industry is of steadily increasing importance. The product is of superior quality, and invariably commands the highest market prices.

The valley is especially adapted to stock and dairy interests. The purity of the air and water, richness of the natural and cultivated grasses, mildness of climate, and fine mountain ranges for summer use, are all factors of importance. The shipments of livestock to outside markets is increasing annually. There are several creameries in operation, while Tonopah and other markets easily reached are supplied with fresh milk from this valley. Poultry-raising is also beginning to be managed in a systematic way, and is becoming an important source of revenue.

The rapid descent and large volume of several of the streams offer great possibilities for development of electric power. Companies for this purpose are already at work, the point of the delivery of the power to be Goldfield and Tonopah, some 80 miles to the eastward. One plant of this kind has been in operation for three years, furnishing light and power for the incorporated town of Bishop.

Text-books on California mineralogy credit Inyo with having the largest variety of minerals of any county. About one hundred and fifty different substances have been listed, including all the common metals in large quantity and many rarer ones. While not the most

important, probably the most unique in local mineral production is the soda plant on the shore of Owens Lake, where the highly mineralized water of the lake is evaporated and the salts thus obtained gathered for refining. Marble, slate, and building material are included in the make-up of this well-favored county.

The greatest drawback is that of communication. As previously mentioned, the county is wholly cut off from western California by the Sierras.

The grand scenic attractions of the county have been painted by Bierstadt and described by many travelers who have ventured into the Sierra fastnesses. When communication is opened so that the trip can be made with comfort, and without too great a loss of time, the county will unquestionably have many summer visitors.

STATISTICS OF INYO COUNTY, 1905-6.

General Statistics.

Value of country real estate	$1,160,932
Of improvements thereon	$528,415
Of city and town lots	$166,285
Of improvements thereon	$218,937
Of personal property	$630,836
Total value of all property	$2,749,697
Expended for bridges, last fiscal year	$7,000
Road levy per $100, 1906	25 cts.
Value of county buildings	$30,000
Irrigating ditches—miles, 98; cost	$160,000
Railroads—One piece of steam—miles, 74¼; assessed value	$1,859 per mile
Electric power plants—2; assessed value	$112,000
Electric power lines—miles, 15; assessed value not given.	

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.
Wheat	5,000	1,500
Barley	1,200	------
Corn	4,000	------
Oats	2,000	------
Alfalfa hay	28,000	------

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	20,000	1,500	21,500
Apricot	400	50	450
Cherry	400	20	420
Fig	100	1	101
Peach	10,000	2,500	12,500
Pear	2,500	250	2,750

Fruit Trees and Vines—Continued.

		Bearing.	Non-Bearing.	Total.
Plum		500	100	600
Prune		4,000	500	4,500
Quince		100	------	100
Almond		------	50	50
Walnut		1,000	250	1,250
Raisin grapes	acres	100	------	100
Table grapes	acres	150	------	150
Wine grapes	acres	300	------	300
Currants	acres	50	------	50
Gooseberries	acres	10	------	10
Raspberries	acres	10	------	10
Strawberries	acres	50	------	50
Blackberries	acres	50	------	50

Livestock Industry.

	Number.	Value.
Cattle—Beef	180	$5,400
Stock	17,500	175,000
Thoroughbred	52	1,300
Dairy Cows—Graded	800	20,000
Swine	520	1,560
Common Horses	1,850	31,000
Work Horses	1,225	65,000
Colts	400	6,000
Mules	310	9,300
Sheep	11,650	28,375
Angora Goats	3,600	4,880

Miscellaneous.

Inyo County reports 600 dozen chickens, worth $2,400; 4,205 beehives, valued at $12,615; 200,000 pounds of honey, worth $1,600,000; and 2 flouring mills, the value of which are not given.

KERN COUNTY.

Kern County, lying in the southern end of the San Joaquin Valley, its eastern boundary extending on to the Mojave Desert over the extreme southerly end of the Sierra Nevada Mountains, is the second largest county in the State and probably has the most diversified resources of any.

At Randsburg, on the eastern border, is one of the largest gold mines on this coast, and the country around Randsburg has many smaller mines that are free-milling ore, which make them paying properties for people or corporations of small means.

Along the southern border where the line crosses the San Emidio Mountains are large deposits of iron ore and antimony which are yet undeveloped, and along the western side of the county are the Sunset, Midway, and McKittrick oil fields, lying along the eastern base of the Coast Range Mountains, and which promise to yield untold wealth in their future production of oil.

In the northern part of the county and surrounding the town of Delano, is a large body of good land which is now attracting considerable attention from investors, as development has shown that within a few feet of the surface lies an unlimited quantity of water which can be raised to the surface to transform the arid plains into orchards and alfalfa fields.

In the northeastern part is the mining town, Kernville, surrounded by good mines, and near it on the south fork of Kern River is the South Fork Valley, where numerous prosperous stockmen have their alfalfa fields that furnish feed to the stock that pasture in the high Sierras in the summer time.

In the center and surrounding the town of Bakersfield, the county seat, lie thousands of acres of fertile land that are irrigated by Kern River, and which are mostly used to raise stock and alfalfa, but will produce anything that can be raised where there is good land and an abundance of sunshine.

Quite a large amount of capital is being interested in the installation of pumping plants in the Weed Patch, which is a fertile tract of land lying at the base of the Coast Range and Sierra Nevada mountains, and ranging in distance between eight and twenty miles from Bakersfield in a southeasterly direction, and has heretofore been uncultivated on account of scarcity of water.

A short distance north of Bakersfield lies the famous Kern River oil field, the production from which has amounted to many million barrels, and which undoubtedly will produce for a great many years to come.

In the Kern River and Sunset oil fields we have numerous refineries that are producing thousands of tons of asphalt that finds a ready market in all parts of the United States.

There are two transcontinental railroads passing through the county, with branch roads running to the McKittrick, Sunset, and Kern River oil fields.

In the Kern River cañon we have one electric power plant, which furnishes light and power to the cities of Bakersfield and Kern. One completed, one nearly completed, and one just commencing work that will furnish electricity for Los Angeles.

STATISTICS OF KERN COUNTY, 1905-6.

General Statistics.

Area, 8,100 square miles, or 5,184,000 acres.	
Number of farms	850
Number of acres assessed	2,844,470
Value of country real estate	$10,814,620
Of improvements thereon	$2,387,390
Of city and town lots	$1,535,060
Of improvements thereon	$1,965,175
Of personal property	$5,998,310
Total value of all property	$22,700,555
Expended on roads, last fiscal yr.	$33,910
Expended for bridges, last fiscal year	$5,680
Number of miles of public roads	1,600
Road levy per $100, 1906	25 cts.
Value of county buildings	$156,000
Irrigating ditches—miles, 208½; cost	$335,530
Railroads, steam—miles, 299; assessed value	$4,316,270
Railroads, electric—miles, 7½; assessed value	$48,750
Electric power plants—3; assessed value	$524,250
Electric power lines—miles, 94; assessed value	$150,450
Number of acres irrigated	120,000

Electric power plants do not include canal of Kern River Co. assessed at $517,000.

Pullman car equipment, $38,060, not included in railroad figures.

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	15,000	6,450	$122,000
Barley	10,000	5,500	117,000
Corn	7,000	6,300	138,000
Total cereals	32,000	18,250	$377,000
Alfalfa hay	------	24,000	$192,000
Grain hay	11,000	14,000	140,000
Total hay	------	38,000	$332,000

In figures given on hay, only mention is made of that shipped out of county.

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	10,000	2,000	12,000
Apricot	25,000	------	25,000
Cherry	1,000	------	1,000
Fig	1,000	------	1,000
Lemon	500	------	500

Fruit Trees and Vines—Continued.

	Bearing.	Non-Bearing.	Total.
Nectarine	1,000	------	1,000
Olive	5,000	------	5,000
Orange	6,000	500	6,500
Peach	40,000	6,000	46,000
Pear	1,500	------	1,500
Plum	6,000	------	6,000
Prune	40,000	------	40,000
Quince	500	------	500
Almond	2,000	------	2,000
Pecan	200	------	200
Walnut	200	------	200
Total fruit trees	139,900	8,500	148,400
Raisin grapes (acres.)	1,000	------	1,000
Table grapes (acres.)	100	------	100
Total acres grapes	1,100	------	1,100
Blackberries (acres.)	20	------	20
Loganberries (acres.)	5	------	5
Raspberries (acres.)	5	------	5
Strawberries (acres.)	25	------	25
Total acres berries	55	------	55

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Lemons (boxes)	1,000	$2,500
Oranges (boxes)	6,000	15,000
Totals	7,000	$17,500

Dried—	Pounds.	Value.
Apricots	300,000	$40,000
Peaches	250,000	23,000
Prunes	1,720,000	43,000
Raisins	1,250,000	62,500
Totals	3,520,000	$168,500

Canned—	Cases.	Value.
Apricots	650	$2,100
Pears	50	200
Peaches	2,300	8,050
Plums	40	110
Totals	3,040	$10,460

Above figures are on articles shipped out of county, as there is no way to secure correct data on that which is consumed within the county.

STATISTICS OF KERN COUNTY, 1905-6—Continued.

Livestock Industry.

	Number.	Value.
Cattle—Beef Stock	58,000	$1,160,000
Dairy Cows—Graded	2,000	60,000
Holsteins	100	3,500
Jersey	100	3,500
Calves	10,000	75,000
Swine	8,000	40,000
Horses—		
Thoroughbred	10	5,000
Common	8,000	480,000
Colts	1,500	37,500
Mules	1,300	104,000
Sheep—Common	135,000	540,000
Lambs	40,000	60,000
Total stock all kinds	264,010	$2,568,500
Wool (pounds)	1,430,000	$185,000

Miscellaneous Products.

	Pounds.	Value.
Bees (hives)—No., 8,000	------	$16,000
Beeswax	800	200
Honey	225,000	11,250
Alfalfa seed	280,000	35,000

Poultry and Eggs.

	Dozen.	Value.
Chickens	1,000	$5,000
Ducks	50	300
Geese	30	300
Turkeys	250	6,250
Eggs	65,000	13,000
Total value		$24,850

Dairy Industry.

	Production.	Value.
Creameries, 3.		
Butter (pounds)	467,500	$96,305

Forest Products.

	Amount.	Value.
Area of timber lands (acres)	10,000	------
Sawmills (number)	3	------

Power used for mills and manufactories in county: Steam—number, 5; water—number, 1.

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value of Product.
Bookbinderies	1	2	------	$1,500
Brick	3	51	5,350,000	44,800
Cigars	3	11	650,000	32,500
Confectionery	2	6	------	9,500
Flouring mills (barrels)	1	12	20,000	90,000
Foundries and iron works	2	50	------	18,975
Lime (barrels)	4	100	160,000	128,000
Hides (pounds)		----	356,430	42,770
Meat packed		----	----	4,000
Tallow (barrels)		----	565	7,345
Olive oil (gals.)		----	40	160
Planing mills	2	4	------	------

Productions Shipped Out of State.

Peaches, canned	1,500 cases
Apricots, canned	500 cases
Prunes, dried	160,000 lbs.
Beeswax	800 lbs.
Honey	200,000 lbs.

LAKE COUNTY.

By her sister counties, Lake has long been cheerfully accorded the title of "The Switzerland of America," owing to her beauty of scenery. The county is located in the heart of the Coast Range, about 100 miles north of San Francisco, and is about 75 miles long and 25 miles wide. Mount St. Helena guards the southern extremity. Clear Lake is a splendid sheet of fresh water 25 miles long and from 2 to 10 miles broad. With the lake surface at an elevation of 1,350 feet above sea-level; having a depth sufficient to float vessels of considerable tonnage and draft; receiving in its basin the waters from several streams of considerable flow; stocked with an amazing wealth of native food fishes; bordered by smiling valleys of great fertility, by orchards of luscious fruit, by gently swelling slopes, by rugged mountains, by wild cañons touched with a certain savage beauty; and bearing upon its heaving breast a constantly increasing proportion of the internal commerce of the community, Clear Lake is the pride of Lake County, as well as the source of its name.

Although classed as mountainous, Lake County has a number of very fertile valleys, some of them being of large area. Artesian water is obtainable in profuse quantities, and with comparatively small outlay of money or effort. Fields are growing luxuriant crops of grain, though annually sown in the same crops for more than a half century. A variety of soils is found throughout the county, and even the valleys show differences. Generally the valleys are rich with alluvium, but in places there are extensive tracts of adobe, black and heavy, and apparently inexhaustible in productiveness. Occasionally a sandy loam is found in the valleys, especially in the neighborhood of the streams traversing the county at short intervals. On the plateau crowning the low foothills which ring the valleys is a lighter soil, but when cleared is capable of raising large vineyards and orchards of peaches, prunes, etc. The rocky hillsides furnish pasture for flocks of Angora goats.

STATISTICS OF LAKE COUNTY, 1905-6.

General Statistics.

Area, 710 square miles, or 454,400 acres.	
Number of farms	950
Number of acres assessed	338,568
Value of country real estate	$2,036,385
Of improvements thereon	$541,665
Of city and town lots	$214,315
Of improvements thereon	$246,050
Of personal property	$461,460
Total value of all property	$3,499,875
Expended on roads, last fiscal yr.	$12,000
Expended for bridges, last fiscal year	$3,000
Number of miles of public roads	550
Road levy per $100, 1906	46 cts.
Value of county buildings	$20,000
Irrigating ditches—miles, 20; cost	$7,000
Electric power plants, 3; assessed value	$2,100
Number of acres irrigated	150

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	3,130	------	------
Barley	2,011	------	------
Oats	1,412	------	------
Corn	361	------	------
Total cereals	6,914	------	------
Alfalfa hay	897	2,691	$13,455
Grain hay	4,741	6,000	30,000
Grass hay	740	1,000	5,000
Total hay	6,378	9,691	$48,455

Wine Industry.

Lake County reports seven wineries and 34,590 gallons of wine, worth $7,000, and 2,000 gallons of vinegar, worth $400.

STATISTICS OF LAKE COUNTY, 1905-6—Continued.

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	14,455	1,028	15,483
Apricot	1,606	240	1,646
Cherry	539	70	609
Fig	922	13	935
Olive	3,000	6	3,006
Orange	123	20	143
Peach	5,000	----	5,000
Pear	26,035	3,094	29,129
Plum	6,955	----	6,955
Prune	41,300	6	41,306
Other kinds	125	----	125
Almond	5,183	735	5,918
Total fruit trees	105,243	5,212	110,455
Raisin grapes (acres.)	1	----	1
Table grapes (acres.)	26	----	26
Wine grapes (acres.)	500	200	700
Total acres grapes	527	200	727
Blackberries (acres.)	24	----	24
Loganberries (acres.)	10	----	10
Strawberries (acres.)	10	----	10
Total acres berries	44	----	44

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds	Value.
Apples	1,000,000	$6,000
Apricots	20,000	600
Blackberries	35,000	1,400
Beans	1,108,000	11,000
Beets	25,000	500
Cabbage	12,000	1,200
Corn	13,000	650
Currants	600	24
Cherries	16,000	800
Figs	14,000	350
Gooseberries	1,000	60
Grapes	4,216,000	31,620
Loganberries	10,000	400
Onions	5,000	100
Olives	60,000	1,500
Pears	1,450,000	16,312
Peaches	100,000	2,000
Peas	2,000	50
Plums	10,000	100
Irish potatoes	450,000	5,750
Strawberries	----	2,000
Tomatoes	----	1,000
Totals	8,547,600	$83,416

Green—	Pounds.	Value.
Almonds	6,000	$600
Apples	45,000	2,700
Beans	9,000	270
Corn	640,000	6,400
Pears	330,000	26,400
Peaches	9,000	720
Plums	10,000	600
Prunes	1,000,000	20,000
Walnuts	2,000	200
Totals	2,051,000	$57,890

Canned—	Cases.	Value.
Beans	21,000	$4,200

Livestock Industry.

	Number.	Value.
Cattle—Beef	2,300	$57,500
Stock	6,265	52,650
Dairy Cows—Graded	1,563	30,000
Jersey	20	500
Calves	2,581	12,905
Swine	4,015	20,075
Horses—		
Thoroughbred	12	2,400
Common	2,092	104,600
Colts	389	7,780
Mules	222	16,650
Sheep—Common	8,192	24,576
Angora Goats	400	2,000
Common Goats	4,509	13,527
Total stock all kinds	32,560	$345,163
Wool (pounds)	95,000	$12,350
Mohair (pounds)	37,000	9,000

Poultry and Eggs.

	Dozen.	Value.
Chickens	2,143	$6,500
Ducks	200	400
Geese	30	360
Turkeys	300	3,600
Eggs	100,000	15,000
Total value		$25,860

Forest Products.

	Amount.	Value.
Area of timber lands (acres)	121,000	$605,000
Sawmills (number)	9	----
Lumber—Cedar (feet)	300,000	9,000
Sugar pine (feet)	500,000	7,500
Fir (feet)	2,000,000	20,000
Shakes	100,000	1,000
Total value		$642,500

Power used for mills and manufactories in county: Steam—number, 9.

Miscellaneous Products.

	Pounds.	Value.
Bees (hives) No., 350	----	$600
Honey	4,000	400
Hops	120,000	15,600
Alfalfa seed	80,000	8,000
Grass seed	1,000	80
Millet	30,000	450
Mineral water (cases)	60,000	150,000

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value of Product.
Flouring mills (barrels)	3	----	6,000	$30,000
Meat products—				
Hides	----	----	7,000	7,000
Lard (lbs.)	----	----	25,000	3,000
Meat packed (tons)	----	----	100,000	10,000
Olive oil (gals)	----	----	100	300
Planing mills	3	10	----	10,000

STATISTICS OF LAKE COUNTY, 1905-6—Continued.

Dairy Industry.

	No.	Pounds.	Value.
Creameries	4	.....	.....
Butter	.....	90,000	$18,000

Productions Shipped Out of County.

	Amount.
Hay	150 tons
Apples, fresh	8,000 boxes
Apples, dried	45,000 lbs.
Peaches, dried	9,000 lbs.
Pears, fresh	36,000 boxes
Pears, dried	330,000 lbs.
Plums, dried	10,000 lbs.

Productions Shipped—Continued.

	Amount.
Prunes, dried	1,000,000 lbs.
Chickens	2,000 doz.
Turkeys	48,000 lbs.
Eggs	100,000 doz.
Beans, canned	21,000 cases
Hops	120,000 lbs.
Alfalfa seed	80,000 lbs.
Hides	65,000 lbs.
Sheep	2,000
Swine	3,000
Wool	95,000 lbs.
Butter	15,000 lbs.
Cheese	50,000 lbs.
Wine, sweet	75,000 gals.
Mineral water	45,000 cases

LASSEN COUNTY.

[The following article is found in "The Counties" number of "For California," the publication of the California Promotion Committee.]

Lassen County lies in the northeastern part of California along the Nevada line. It is traversed from south to north by the Nevada-California-Oregon Railway (narrow-gauge), which connects at Reno, Nevada, with the Southern Pacific system. The located line of the Western Pacific—in course of construction—runs through the southern portion of the county. Susanville, the county seat, is in Honey Lake Valley, a little south of the center of the county.

Lassen embraces large areas comprising rich valley lands, suited to agriculture; rolling hills and uplands, affording splendid range for stock; and mountain table lands covered with timber.

The county has a population of only about 5,000. It could easily support many times that number. The assessment roll now foots over five and a half millions. The county has no debt and the tax rate is only about $1.60 per $100 valuation. The people are generally well-to-do and prosperous. The bank at Susanville, with a capital of $50,000, has more than $300,000 on deposit, which shows a condition of easy finances.

The principal present industries are farming and stock-raising. There are paying mines in the county, but as a whole Lassen is not mineral. Timber lands which are not in forest reserves are now generally held in private ownership, but as yet the manufacture of lumber has not been commenced.

But farming and stock-raising will always be the principal industries of the county. Climate and soil are particularly adapted to them. The altitude of the largest, most fertile and most productive valleys, such as Honey Lake Valley, Big Valley, and Long Valley, is a little over 4,000 feet. Other large valleys, like Madeline Plains, Willow Creek Valley, and Secret Valley, are in the neighborhood of 5,000 feet above sea-level. While the high valleys are not as well adapted to general farming as the lower ones, they are quite productive, and well suited to the stock-raising business. The climate generally is similar to that of the northeastern states, so far as range of temperature is concerned, but our summer season is quite dry, making irrigation necessary as a rule. With irrigation, where the altitude is not too great, any of the ordinary products of the temperate zone can be produced in abundance and of fine quality. Apples, pears, cherries, peaches, apricots, and berries of all kinds do splendidly. Of farm products alfalfa is probably the most important, though native grasses, timothy, and redtop are extensively raised.

Good hay and grass and pure cold water make the county an ideal one for dairying. There are a number of creameries in the county, and their product commands the top price in city markets.

Improved farm lands range in price from $25 to $100 or more per acre.

District schools are scattered all over the county. A county high school is located at Susanville. There are quite a number of churches in the county, including Methodist, Baptist, Catholic, and others. Three weekly newspapers are published—the *Lassen Advocate* and *Lassen Weekly Mail* at Susanville, and the *Big Valley Gazette* at Bieber.

Susanville is the largest town, with a population of about 1,000. It has a good and abundant water supply and good facilities for fighting fire. Its stores are well stocked, and goods are sold at reasonable prices. Business buildings, as a rule, are substantial, and residences handsome.

Lassen County has a range of temperature wide enough to give a pleasing variety to the seasons. Health conditions are fine. Pulmonary diseases are very rare, and malaria almost unknown. There are still large quantities of land open to entry, which, with water for irrigation, will make good farms and homes. There is plenty of water to irrigate these lands.

STATISTICS OF LASSEN COUNTY, 1905-6.

General Statistics.

Area, 4,465 square miles, or 2,857,600 acres.	
Number of farms	645
Number of acres assessed	665,389
Value of country real estate	$3,379,865
Of improvements thereon	$423,050
Of city and town lots	$90,690
Of improvements thereon	$187,925
Of personal property	$1,111,536
Total value of all property	$5,193,066
Expended on roads, last fiscal yr.	$18,655
Number of miles of public roads	625
Road levy per $100, 1906	40 cts.
Value of county buildings	$45,000
Irrigating ditches; cost	$25,000
Railroads, steam—miles, 115; assessed value	$253,121
Electric power plants—2; assessed value	$3,900
Number of acres irrigated	26,240

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	5,300	2,450	$48,750
Barley	1,500	500	12,800
Oats	425	190	4,900
Rye	430	85	2,300
Total cereals	7,655	3,225	$68,750
Alfalfa hay	4,225	16,000	$80,000
Grain hay	115	345	1,380
Grass hay	90,000	19,600	117,600
Total hay	94,340	35,945	$198,980

Number of Fruit Trees and Vines.

	Bearing.
Apple	18,000
Apricot	110
Cherry	1,525
Peach	3,985
Pear	550
Plum	625
Prune	1,432
Walnut	150
Total fruit trees	26,377

Fruit Trees and Vines—Continued.

	Bearing.
Blackberries (acres)	10
Currants (acres)	3
Gooseberries (acres)	4
Loganberries (acres)	2
Raspberries (acres)	14
Strawberries (acres)	25
Total acres berries	58

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	65,100	$1,803
Blackberries	3,800	380
Beans	1,500	750
Beets	40,000	2,000
Cabbage	5,000	200
Corn	15,125	425
Currants	500	100
Cherries	4,500	225
Gooseberries	600	125
Loganberries	300	150
Onions	20,000	800
Pears	11,000	225
Peaches	20,000	6,000
Peas	3,000	150
Plums	21,000	630
Irish potatoes	200,000	2,000
Prunes	4,500	225
Raspberries	6,050	625
Strawberries	3,000	400
Tomatoes	7,500	800
Totals	432,475	$18,013

Livestock Industry.

	Number.	Value.
Cattle—Beef	10,000	$200,000
Stock	31,000	550,000
Dairy Cows—Graded	2,700	75,000
Calves	11,000	18,000
Swine	3,800	9,000
Horses—		
Thoroughbred	8	10,000
Standard-bred	2,100	105,000
Common	5,000	100,000

STATISTICS OF LASSEN COUNTY, 1905-6—Continued.

Livestock Industry—Continued.

	Number.	Value.
Colts	850	$12,750
Mules	400	7,500
Sheep—Common	65,000	195,000
Lambs	9,500	23,500
Common Goats	75	300
Total stock all kinds	141,433	$1,306,050
Wool (pounds)	290,000	$58,000

Dairy Industry.

	No.	Production.	Value.
Creameries	4	------	------
Butter (pounds)		600,000	$108,000
Cheese (pounds)		50,000	7,500

Poultry and Eggs.

	Dozen.	Value.
Chickens	1,600	$6,150
Ducks	30	425
Geese	12	275
Turkeys	80	2,575
Eggs	25,000	6,400
Total value		$15,825

Forest Products.

	Amount.	Value.
Area of timber lands (acres)	270 825	$1,920,000
Sawmills (number)	7	35,000
Fuel, wood (cords)	16,000	27,000
Lumber—Cedar (feet)	90,000	2,000
Pine (feet)	2,085,000	33,500
Posts (pieces)	12,000	1,150
Shakes	30,000	350
Shingles	350,000	1,050
Total value		$2,020,050

Miscellaneous Products.

	Pounds.	Value.
Bees (hives) No., 3,500.		
Honey	121,000	$12,100
Alfalfa seed	210,000	21,000

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value. of Product.
Confectionery (pounds)	2	2	5,000	$1,000
Flouring mills (barrels)	3	8	6,000	56,000
Hides		--	1,000	3,000
Lard (pounds)		--	8,000	1,000
Meat, packed (tons)		--	35	10,500
Planing mills	3	6	------	18,000

Lassen County reports 1 brewery; output, 212 barrels of beer, valued at $1,060.

Power used for mills and manufactories in county: Steam—number, 7.

Productions Shipped Out of State.

Apples, fresh	300 boxes
Peaches, fresh	1,500 boxes
Chickens	300 doz.
Turkeys	1,250 lbs.
Alfalfa seed	185,000 lbs.
Cattle	6,000
Hides	1,000
Horses	2,700
Sheep	30,000
Swine	1,100
Wool	280,000 lbs.
Butter	58,000 lbs.
Cheese	47,500 lbs.
Lumber	1,500 M.

LOS ANGELES COUNTY.

In wealth, population, and resources Los Angeles is the most important county in Southern California. There are two rivers in the county: the Los Angeles and the San Gabriel. During a large part of the year these are dry beds of sand, what little water they contain finding its way through the porous sand to the bedrock. In the winter they are dangerous streams. The Los Angeles River rises in the western part of the San Fernando Valley, about 12 miles northwest of the city, and flows easterly 18 miles to the Los Angeles Pass. Its stream is fed all along by springs. Two other "rivers," the Pacoima and the Tejunga, join it in the San Fernando Valley. Turning south, it flows through the Los Angeles Pass, and on through the city.

Los Angeles County embraces within its limits a great variety of scenery and climate. Within its territory may be found the climate and scenery of almost every part of the State, from the cool and breezy seashore to the warm inland plains and bracing mountain tops. Of the area of the county, about four fifths is capable of cultivation, the remainder being mountainous. The shore line is 85 miles in length. Nine tenths of the population is within thirty miles of the ocean.

The marvelous growth which has been made during the past few years may be seen from the statement that, within the space of twenty-four years, the population of the county has increased more than ten-fold, and the assessed valuation of property in proportion.

The chief industry is horticulture, the list of products including everything that can be grown in the State, and almost everything that can be raised in semi-tropic countries. The area of land devoted to horticultural purposes is being rapidly extended, as the large tracts are subdivided and improved.

The county is well provided with transportation facilities. A dozen lines of railroad center in Los Angeles City, tapping almost every section of the county, while coast steamships call regularly at the leading seaports.

Perhaps the most important enterprise for Los Angeles is the big breakwater by the Federal Government at San Pedro. By means of this breakwater the depth of water over the bar will be so increased as to permit ocean-going vessels to come to the wharves, and Los Angeles will then be able to compete for its share of the growing Oriental trade. Other shipping points of the county are Port Los Angeles, near Santa Monica, and Redondo.

The San Gabriel Valley, a choice section of Los Angeles County, has the Sierra Madre range on the north. These mountains are grand and precipitous, inclosing the valley like a wall. This valley is the best known of any portion of Southern California. Even before there was any "boom" here worthy of mention, lands in the valley commanded a comparatively high price. As with most attractive sections, the level-

headed mission fathers discovered its advantages, and founded the San Gabriel Mission—whose church is still in good preservation—in 1771. Now railroads traverse the valley, and the land is rapidly being transformed into a succession of small homes and thriving little cities. The valley contains 100 square miles of territory. The San Gabriel contains some of the choicest fruit land in Southern California, and is largely devoted to the raising of oranges and lemons, as well as deciduous fruits.

Pasadena, a beautiful city, is located at the foot of the Sierra Madre range, about seven miles from Los Angeles. Within twenty years Pasadena has grown from a sheep pasture to a city of beautiful homes, with a world-wide reputation. Other settlements in the valley are Alhambra, Monrovia, Duarte, and Azusa, all of which are mainly supported by horticulture.

Adjoining San Gabriel Valley on the east is Pomona Valley. Irrigation is cheaply supplied to this section from the San Antonio River. The soil and climate are peculiarly adapted to the culture of citrus fruits. Railroad facilities are very good, and increasing, which has caused the valley to settle up rapidly. It contains a number of flourishing towns, the chief of which is Pomona, one of the most thriving cities of Southern California. For miles in every direction around Pomona extend continuous orchards of oranges, lemons, apricots, peaches, prunes, olives, and other fruit trees, a specialty being made of olive culture.

Other important sections of the county are Los Nietos Valley, a well-watered district, noted for corn, alfalfa, and dairy products; the stretch of country between Los Angeles City and the ocean; San Fernando Valley, north of Los Angeles, in which a large amount of fine wheat is raised; and Antelope Valley, an elevated region in the northern part of the county, where land is cheap and, with water, very productive.

Los Angeles enjoys railroad competition in the shape of three transcontinental lines. The Pacific Coast Steamship Company runs vessels every few days from Los Angeles County ports to San Francisco and San Diego.

There is a great variety of soil in Los Angeles County, varying from light sandy loam to heavy adobe.

A mistaken idea prevails to some extent that farming is only carried on in Los Angeles County by means of irrigation, and that without it crops would be a failure. For grains and winter crops irrigation is not employed. Corn is irrigated in some localities, being a summer crop, but is successfully grown in many places without irrigation. Upon some lands, after a crop raised without irrigation has been harvested, another is raised by means of irrigation. On irrigated land two or three crops a year are frequently raised. With an artificial supply of water, the farmer is rendered independent of the season's rain, while the product of his lands is enormously increased.

The development of the horticultural industry during the past few years has been remarkable. The most important horticultural product is the orange. Besides the orange and lemon, the principal fruits raised are the almond, fig, prune, apricot, walnut, peach, pear, and berries.

Deciduous fruits are shipped fresh, canned, dried, and crystallized. An active demand for our dried fruits has grown up in Europe.

Alfalfa, which is largely grown for hay, is a most valuable forage plant. It is cut from three to six times a year. Large quantities of

wheat and barley are raised. Corn sometimes grows to a height of twenty feet. Pumpkins have been raised weighing over 400 pounds. There is a beet-sugar factory at Alamitos. Los Angeles honey is celebrated all over the country. In the neighborhood of Los Angeles calla lilies, tuberoses, carnations, and other flowers are grown by the acre. Hundreds of acres are devoted to the cultivation of celery, which is shipped East by the trainload. Winter vegetables, such as string beans, tomatoes, green peas, and chile peppers, constitute a big business.

Until only a few years ago, most of the butter consumed in Southern California was imported from the North and East. This is no longer the case, a number of creameries having been established during the past few years, with most successful results.

Poultry does well in Los Angeles County when it is given the same attention it receives in the East. Eggs always command a good price.

Ostriches are raised for their plumes, and the industry is profitable. There is a large ostrich farm at South Pasadena.

Among the game found in the county are wild geese, ducks, snipe, rabbits, squirrels, foxes, deer, wildcats, California lions and bear, the latter being found in the northern part of the county.

The angler finds plenty of trout in the mountain cañons. In the ocean there is excellent fishing, both with line and seine, and some remarkable catches are made. The yellowtail, ranging from 15 to 80 pounds, is very numerous in the waters of the Pacific. The tuna attains a length of five feet or more, and a weight of from 100 pounds upward. "Jewfish" are sometimes caught weighing 400 pounds.

Although Los Angeles County is chiefly noted as a horticultural section, its mineral wealth is by no means unimportant. Including petroleum, it ranks fourth in mineral products among the counties, and is the only one which leads in five mineral products. Los Angeles is the center of a number of rich mineral fields in Southern California which annually produces many millions of dollars.

One of the most remarkable features of development in Los Angeles County has been the greatly increased production of petroleum. For over twenty-five years petroleum has been produced on a limited scale in Los Angeles and Ventura counties, but it is only within the past few years that the industry has assumed great importance. The oil produced in California differs from that of the Eastern States, being of a heavier grade, with an asphaltum base, and it is used almost exclusively for fuel. It has been adopted by most of the leading factories of this section, and is used largely by the railroads. A careful test made with a locomotive showed that oil at $1 a barrel is equivalent to coal at $4 a ton.

The school facilities of Los Angeles are especially good. Besides the complete system of public schools, private schools and colleges abound in Los Angeles, Pasadena, and other towns. Many Eastern people avail themselves of the opportunity to send children with a tendency to weak lungs to a country where plenty of out-of-door exercise is a possibility every day in the year. Most of the leading religious denominations are represented, not only by scores of churches, but also by one or more religious colleges. The work of the school is further supplemented by an army of specialists in music, painting, and every department of art. The Chautauqua has an active membership of nearly a thousand, and meets annually at Long Beach. Lectures and other entertainments,

by home and foreign talent, are of almost daily occurrence. The educational and social facilities afforded by Los Angeles are, in the widest sense of the word, unsurpassed. Public libraries are numerous and well stocked with the latest works.

Catalina Island is a most attractive and popular resort in the Pacific, just off the coast of Los Angeles County. Between this resort and Los Angeles City there is a most excellent rail and boat service.

STATISTICS OF LOS ANGELES COUNTY, 1905-6.

General Statistics.

Area, 4,000 square miles, or 2,560,000 acres.	
Number of farms	5,755
Number of acres assessed	759,408
Value of country real estate	$41,430,990
Of improvements thereon	$7,307,880
Of city and town lots	$130,167,255
Of improvements thereon	$63,542,475
Of personal property and money	$56,755,488
Total value of all property	$299,204,088
Expended on roads, last fiscal yr.	$217,143
Expended for bridges, last fiscal year	$8,652
Number of miles of public roads	7,500
Road levy per $100, 1906, 60 cents; total	$326,021
Value of county buildings and furniture	$1,800,616
Value of school property—furniture and libraries	$3,165,085
Irrigating ditches and conduits—cost	$500,000
Railroads, steam—miles, 649.79; assessed value	$6,772,706
Railroads, electric—miles, 755.69; assessed value	$11,556,285
Electric power plants and substations—19; assessed value	$1,050,500
Electric power lines—miles, 1,951.74; assessed value	$847,240

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	25,000	17,500	$450,000
Barley	60,000	35,000	700,000
Corn	5,000	3,500	90,000
Total cereals	90,000	56,000	$1,240,000
Alfalfa hay	4,000	25,000	$250,000
Grain hay	25,000	35,000	400,000
Total hay	29,000	60,000	$650,000

Number of Fruit Trees and Vines.

	Bearing.	Non Bearing.	Total.
Apple	105,255	40,235	145,490
Apricot	134,990	28,850	163,840
Cherry	1,350	------	1,350
Fig	19,245	1,140	20,385
Lemon	435,418	37,520	472,938
Nectarine	1,940	250	2,190
Olive	233,720	4,065	237,785

Fruit Trees and Vines—Continued.

	Bearing.	Non-Bearing.	Total.
Orange	1,738,213	389,280	2,127,493
Peach	161,770	40,030	201,800
Pear	57,995	8,780	66,775
Plum	35,860	6,005	41,865
Prune	58,010	5,100	63,110
Quince	4,650	470	5,120
Almond	143,700	------	143,700
Pecan	1,130	------	1,130
Walnut	220,000	50,000	270,000
Total trees	3,354,376	611,725	3,966,101
Raisin grapes (acres.)	200	------	200
Table grapes (acres.)	2,935	415	3,350
Wine grapes (acres.)	9,540	1,270	10,810
Total acres.	12,675	1,685	14,360
Blackberries (acres.)	455	------	455
Raspberries (acres.)	215	------	215
Strawberries (acres.)	1,215	------	1,215
Total acres.	1,885	------	1,885

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	1,500,000	$15,000
Apricots	5,000,000	75,000
Asparagus	10,000	1,250
Blackberries	800,000	48,000
Beans	940,000	23,500
Beets	200,000	1,000
Cabbage	5,000,000	45,000
Celery (dozen)	100,000	20,000
Cauliflower	6,000,000	100,000
Cherries	10,000	500
Figs	400,000	14,000
Grape-fruit	140,000	16,500
Lemons (boxes)	736,100	2,576,350
Loganberries	200,000	24,000
Nectarines	10,000	500
Oranges (boxes)	1,669,500	4,591,125
Pears	500,000	12,500
Peaches	5,000,000	82,500
Peas	1,000,000	30,000
Persimmons	10,000	500
Plums	800,000	14,000
Irish potatoes	4,000,000	35,000
Sweet potatoes	1,000,000	10,000
Prunes	600,000	9,000
Raspberries	75,000	9,000
Strawberries	7,000,000	420,000
Tomatoes	1,400,000	75,000
Total value		$8,249,225

STATISTICS OF LOS ANGELES COUNTY, 1905-6—Continued.

Fruit, Vegetables, Etc.—Continued.

Dried—	Pounds.	Value.
Almonds	40,000	$6,000
Apples	500,000	67,500
Beans	9,500,000	280,000
Onions	1,500,000	40,000
Peaches	350,000	28,000
Peanuts	3,000	150
Prunes	90,000	2,500
Walnuts	6,096,330	723,150
Totals	18,079,330	$1,147,300

Canned—	Cases.	Value.
Apricots, Blackberries, Figs, Grapes, Pears, Peaches, Plums, Raspberries, Strawberries	175,000	$525,000
Tomatoes	75,000	120,000
Chile, 1900 tons	.....	85,000
Beans	13,000	24,500
Totals	26,400	$754,500

Wines, Brandies, Etc.

Number of wineries, 60; number of breweries, 3.

	Gallons.	Value.
Wine—Angelica	125,000	$35,000
Burgundy	6,000	1,200
Cabernet	6,000	1,200
Claret	650,000	97,500
Hock	36,000	9,000
Madeira	5,000	1,300
Malaga	5,000	1,300
Muscatel	65,000	18,200
Port	600,000	156,000
Reisling	150,000	30,000
Sauterne	10,000	2,000
Sherry	200,000	56,000
Tokay	5,000	1,250
Zinfandel	60,000	12,000
Totals	1,923,000	$421,950
Beer (barrels)	168,570	$1,220,000

Fish Industry.

	Pounds.	Value.
Sardines and macker'l	800,000	$56,500
Other kinds	4,069,941	203,500
Totals	4,869,941	$260,000

Dairy Industry.

	No.	Production.	Value.
Dairies, milk (gallons)	600	106,000,000	$1,590,000
Skimming stations	6	.....	.....
Butter (lbs.)	12	500,000	150,000
Cheese (lbs.)	--	1,000,000	160,000
Cream (gals.)	--	800,000	60,000

5,000,000 pounds of butter manufactured from products shipped in from other counties.

Livestock Industry.

	Number.	Value.
Cattle—Beef	1,000	$40,000
Stock	2,000	60,000
Dairy Cows—Graded	3,000	120,000
Angus	25	1,000
Guernsey	50	3,250
Herefords	50	3,250
Holsteins	100	6,500
Jersey	200	10,000
Calves	8,000	40,000
Swine	3,000	30,000
Horses—		
Thoroughbred	100	25,000
Standard-bred	200	40,000
Common	500	40,000
Colts	500	15,000
Mules	100	8,000
Sheep—Common	60,000	270,000
Lambs	20,000	60,000
Common Goats, Catalina	12,000	4,800
Wool (pounds)	500,000	60,000

Manufactories.

	No.	No. of Employes.	Quantity Produced.	Value of Product.
Bookbinderies	16	321	.....	$424,710
Paper boxes	7	154	.....	171,950
Wood boxes	5	105	1,850,000	298,000
Brick	15	650	110,000,000	660,000
Brooms (doz.)	8	67	47,100	120,290
Carriages and wagons	54	443	1,539	751,720
Cigars	35	300	5,500,000	220,000
Clothing	9	674	.....	979,800
Coffee, spices, etc. (lbs.)	10	140	4,026,700	678,580
Confect'ry (lbs.)	23	426	6,313,725	963,510
Cooper-shops	5	26	105,000	131,000
Grist mills	9	217	.....	3,038,855
Felt piano hammers (sets)	1	50	28,922	76,315
Foundries and iron works	17	832	.....	1,620,000
Felt (lbs.)	1	100	197,146	204,290
Furniture	30	400	.....	1,513,000
Fertilizer (tons)	5	64	10,880	320,350
Jewelry	10	83	.....	180,150
Leather goods	225	550	.....	750,000
Art leather	16	158	.....	189,000
Lime (barrels)	1	12	15,500	15,500
Macaroni (lbs.)	3	25	1,715,000	68,600
Malt (tons)	3	---	3,408	137,940
Meat products	5	670		
Hides (lbs.)		---	5,376,570	661,660
Lard (lbs.)		---	2,931,000	297,200
Meat packed (tons)		---	17,675	2,641,000
Tallow (bbls.)		---	6,185	118,000
Olive oil (gals.)	5	66	144,500	231,750
Paper (lbs.)	1	20	2,400,000	60,000
Pickles (gals.)	7	120	467,930	131,600
Pickled olives (gallons)	4	70	133,550	46,270
Iron pipe	7	360	.....	1,356,810
Sewer pipe	3	93	15,200	163,715
Planing mills	53	1745	.....	4,889,720
Potteries	6	35	.....	43,000
Soap (lbs.)	3	71	5,308,000	257,725
Shoes and slippers	3	166	186,010	189,621

STATISTICS OF LOS ANGELES COUNTY, 1905-6—Continued.

Manufactories—Continued.

	No.	No. of Employes.	Quantity Produced.	Value of Product.
Artificial stone	---	---	---	$725,000
Granite	---	---	---	77,085
Syrups and extracts	9	65	239,500	193,095
Tanneries	2	36	15,150	292,750
Tin and galvanized iron	45	169	---	357,105
Willow and wooden ware	3	39	---	80,235
Wall plaster (tons)	2	25	26,000	70,000
Trunks	10	85	24,400	173,850
Art metal	11	162	---	300,500
Paint	6	88	---	495,000

Forest Products.

Area of timber lands, 60,000 to 70,000 acres are embraced in Government Forest Reserve.

Fuel, wood, 5,000 cords, valued at $30,000.

Miscellaneous Products.

	Pounds.	Value.
Bees (hives)—number, 40,000	---	$200,000
Beeswax	9,000	2,050
Flowers and plants (acres)	350,000	30,640
Honey	696,666	34,833
Alfalfa seed	10,000	15,000
Sugar beets (tons)	50,000	250,000
Oil (barrels)	3,545,000	1,595,000

Poultry and Eggs.

	Dozen.	Value.
Chickens	30,000	$175,000
Ducks	3,000	15,000
Geese	500	3,000
Turkeys	5,000	90,000
Eggs	2,000,000	600,000
Total value		$883,000

Productions Shipped Out of State.

Almonds	35,000 lbs.
Apricots, dried	500,000 lbs.
Apricots, canned	1,500 cases
Grape-fruit	70,000 boxes
Lemons	704,900 boxes
Oranges	1,520,700 boxes
Peaches, dried	325,000 lbs.
Peaches, canned	1,000 cases
Pears, canned	600 cases
Strawberries, fresh	1,500,000 lbs.
Walnuts	6,050,000 lbs.
Beans, dried	4,500,000 lbs.
Beeswax	750 lbs.
Cabbage	2,000,000 lbs.
Honey	418,000 lbs.
Celery	50,000 lbs.
Onions, dried	450,000 lbs.
Irish potatoes	10,000 sacks
Sweet potatoes	1,000 sacks
Tomatoes, fresh	15,000 boxes
Wool	350,000 lbs.
Beer	10,600 bbls.
Wine, sweet	866,250 gals.
Wine, table	800,000 gals.
Sardines	7,000 cases
Brick	600,000
Brooms	7,250 doz.
Cigars	1,750,000
Olive oil	34,800 gals.
Olives, pickled	50,000 gals.

MARIN COUNTY.

Marin County is decidedly one of water frontage, being bounded on the west and south by the Pacific Ocean and by the Golden Gate, which separates it from San Francisco by only a mile and a half at its nearest point, and on the east by San Francisco Bay.

The topographical features are rolling hills and numerous small valleys. A part of the Coast Range crosses Marin in a northwesterly and southeasterly direction, and much of the surface of the county is broken and hilly, but a considerable portion immediately on the shore is composed of marsh and overflowed lands. The highest land is Mount Tamalpais, which has an elevation of 2,608 feet.

The soil varies from the rich adobe clay of the salt marshes to the sharp, gravelly loam of the higher foothills. In the valleys it is composed of heavy black loam with an admixture of gravel; in the foothills a reddish loam prevails, sharper, and carrying less adobe. It is all easily worked, heavily charged with the elemental constituents of plant life, admirably suited to horticultural purposes, and wherever worked to fruit yields heavily. Irrigation is not required. The depth of the soil, its retentive nature, and ample rainfall in winter, render artificial watering unnecessary.

Annual average rainfall at Point Reyes, 17.56; Point Bonita, 25.39; San Rafael, 39.58. Mean summer temperature of San Rafael, 76° for June, July, August and September; for the other months, 61°.

The principal industry is dairying, but of late years attention has been paid to fruit-growing. Some of the finest apples grown in the State are produced. On the dairy lands of the Novato ranch there are ten orchards. On every rented subdivision of this, and the Burdell ranch, are apple, pear, quince, fig, pomegranate, persimmon, apricot, peach, plum, and other fruit trees, the thrifty growth and large yield from which prove the superior adaptability of the soil and climate of this portion to fruit-growing. On the Novato ranch is one of the largest fruit orchards, including one of the oldest and most celebrated apple orchards in the State.

The land is generally held in large tracts, and rented out for dairying purposes. As a result there is but a sparse population, and but little advance is made in horticulture, although the greater part of the county is eminently fitted for this industry. The DeLong orchard was planted in 1857, and has been in continuous bearing from the beginning.

Immense amounts of vegetables are shipped from the lowlands.

The shipments of butter are enormous, and the quality is first class.

Most of the large ranches are stocked by the owners, and divided into tracts, which are leased at annual rentals, according to the number of cows.

San Rafael is the county seat. It has many fine buildings, public and private, elegant hotels, banks, fine churches, schools, electric lights, and a perfect sewerage system. It is a noted place of residence for San Francisco business men, and its hotels are a favorite resort for invalids and tourists. Its climate is regarded as very favorable for those with pulmonary complaints. Its private dwellings are elegant and its drives most beautiful and romantic. The road to the summit of Mount Tamalpais is a continuous and easy grade. San Rafael, in a sheltered valley, is secure from ocean fogs and winds. It is in constant communication with San Francisco by rail and ferry at Point Tiburon.

Sausalito is also a favorite place of residence for San Francisco businessmen, possessing features similar to San Rafael. Novato is the center of the fruit district; Point Reyes of the dairy interests.

At San Quentin is located one of the two State prisons. It is situated on San Francisco Bay, about 12 miles north of San Francisco, with which it is connected by ferry.

STATISTICS OF MARIN COUNTY, 1905-6.

General Statistics.

Area, 516 square miles, or 330,000 acres.	
Number of farms	400
Number of acres assessed	324,624
Value of country real estate	$5,765,250
Of improvements thereon	$1,244,680
Of city and town lots	$2,870,020
Of improvements thereon	$2,706,715
Of personal property	$1,277,510
Total value of all property	$13,864,175
Number of miles of public roads	268
Road levy per $100, 1906	35 cts.
Value of county buildings	$115,000
Railroads, steam—miles, 85.05; assessed value	$978,030

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	782	12,103	$351,076
Corn	43	380	1,706
Total cereals	825	12,483	$352,782
Hay	5,676	29,728	$264,492

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	7,660	1,963	9,623
Apricot	2,312	50	2,362
Cherry	213	----	213
Fig	32	----	32
Olive	3,000	----	3,000
Orange	189	----	189
Peach	2,170	50	2,220
Pear	771	----	771
Plum	331	20	351
Prune	3,326	100	3,426
Quince	232	----	232
Almond	140	----	140
Walnut	2	25	27
Total fruit trees	20,378	2,208	22,586
Wine grapes (acres)	2,036	55	2,091

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apple	462,600	$1,251
Beans	650	13
Beets	2,200	1,100
Cabbage	2,800	420
Celery	1,000	30
Cauliflower	22,500	225
Cherries	400	30
Grapes	760,000	7,700
Onions	8,500	85
Pears	6,000	80
Peaches	1,280	640
Peas	7,500	94
Quinces	5,220	52
Tomatoes	318,000	3,212
Total value		$14,932

Dried—	Pounds.	Value.
Onions	20,000	$200
Prunes	4,000	120
Totals	24,000	$320

Livestock Industry.

	Number.	Value.
Cattle—Beef	704	$17,690
Stock	4,300	118,604
Dairy Cows—Graded	24,495	797,820
Holsteins	2,362	60,865
Jersey	1,505	65,000
Shorthorns	700	------
Calves	3,527	20,870
Swine	9,953	72,234
Horses—		
Thoroughbred	2	------
Standard-bred	1	------
Common	3,056	210,010
Sheep—Common	1,315	3,615
Lambs	223	426
Total stock all kinds	52,143	--------
Wool (pounds)	2,811	365

STATISTICS OF MARIN COUNTY, 1905-6—Continued.

Dairy Industry.

	No.	Production.	Value.
Creameries (lbs.)	3	109,500	$13,687
Butter (pounds)	--	2,114,390	429,888
Cheese (pounds)	2	2,400	240
Cream (gallons)	--	130,790	7,684

Wines, Etc.

Marin County reports 2 wineries with an output of 46,700 gallons of claret wine, worth $6,750; and 1 brewery with an output of 4,000 barrels of beer, worth $12,500.

Poultry and Eggs.

	Dozen.	Value.
Chickens	13,172	$79,800
Ducks	10	90
Geese	19	228
Turkeys	32	787
Eggs	1,521,337	301,011
Total value		$381,916

MENDOCINO COUNTY.

Mendocino County has 100 miles of coast-line. In general topography it is mountainous, with valleys lying between the mountain chains and along the coast. It, together with the counties of Humboldt and Trinity, embodies the greater part of the northern Coast Range mountains, and contains their highest peaks and deepest cañons, fertile valleys, wooded slopes, rushing rivers, and picturesque scenery. It shares with Sonoma, Humboldt, and Del Norte the glory of the great redwood belt.

The county has a length of 85 miles from north to south, and the width is 45 miles from east to west. It is traversed the entire length by the Coast Range, which is composed of two parallel ridges. These mountains vary in height from 1,000 to 3,000 feet. Their lower slopes have a gentle declivity, while the higher portions are generally precipitous and furrowed with ravines and gulches. There are many small productive valleys throughout the county.

Mendocino is well watered with the numerous streams which take their rise in the mountain chain which intersects her territory. The Eel River, running north, and the Russian River, running south, have their sources in this county, and are the principal streams. A large number of tributaries connect with them, while down the slope of the western ridge large numbers of creeks, some of which might aspire to the dignity of rivers, find their way to the Pacific.

Almost the entire coast section is composed of valleys, in some places extending inland five miles, and the soil is very fertile and productive. The towns are all short distances apart, and most of the larger ones have large sawmills and are the shipping points for large quantities of lumber, ties, tanbark, etc.

In Ukiah Valley there is the greatest variety of soil, even on a small tract. All of the best lands are under cultivation. Holdings are not large, 200 acres of valley land being an exceptional farm, and the tendency is to subdivision.

The soil in Yorkville Valley is a rich, black loam, and well adapted to the growing of vegetables, fruits, grains, and hops. The soil of the hillsides and mountains is well suited to the growing of grass, vines, and fruits, and in some places grain.

Anderson Valley is a long, narrow strip of land lying between two chains of mountains. It extends 17 miles southeast and northwest, and is from 1 to 2 miles in width. The soil in this valley is a rich alluvium, and is well adapted to the growing of vegetables, fruits, and cereals. The soil of the hills is a rich, black loam, except in a few places, where there is adobe and gravel.

In Potter Valley the soil is mostly a sedimentary deposit, but a variety exists—some clay, a small amount of adobe, and some lands well adapted to fruit-raising.

In Little Lake Valley the soil generally is a rich, sandy loam, but in a few places a black loam is found. The soil is very productive,

and never in the history of the valley has there been anything approaching a failure.

Wheat, barley, oats, and corn are the principal grains raised. Hops, beans, potatoes, and garden vegetables of various kinds are raised profitably in several localities. Fruits of widely varied nature are grown in gradually increasing quantities, oranges, lemons, figs, prunes, peaches, plums, apricots, apples, and pears being cultivated. The apples have been noted for their excellence for nearly twenty years. The Bartlett pears are eagerly sought by the canning companies. The planting of pear orchards has been encouraged of late years by the demonstration repeatedly given that this fruit tree is a reasonably certain bearer, and the returns are large. Strawberries, blackberries, and loganberries are cultivated increasingly, with good results.

There are extensive horse and cattle ranges. Dairying is a remunerative occupation, and with railroad facilities this line of production will be vastly increased. The making of cheese is followed with profit in Upper Lake.

Large bodies of sugar and yellow pine, fir, cedar, and oak give employment to several sawmills and furnish the home market a good quality of lumber. The minerals have heretofore been represented by the quicksilver industry, although gold, silver, copper, and oil have been discovered in small quantities. Besides quicksilver, immense quantities of mineral water have been bottled at the many mineral springs and shipped to all parts of the country. The several mineral springs are the sites for as many health resorts, as many as thirty thousand guests being entertained from all parts of the country each summer. Some of them go to the resorts for their health, the bright, clear atmosphere being very beneficial, and the waters frequently having a highly curative property in certain complaints. Others seek the deer, the fishing, and other sports. Among the resorts are Bartlett, Highlands, Adams, Harbin, Zeigler, Witter, and Anderson springs; Blue Lakes, Laurel Dell, Hoberg's, Soda Bay, Glenbrook, Carlsbad, Saratoga, Bonanza, Astorg, England, Howard, and Bynum.

There are several mines from which large amounts of quicksilver have been taken. Natural gas is found. There are large deposits of sulphur and of borax in some parts of the county.

Along the coast from Hardy south to Gualala there is a strip of farming and dairy land, varying in width from ½ to 5 miles, and comprising as rich and productive soil as can be found anywhere. Around Manchester, Bridgeport, and Point Arena are located a number of creameries that stand at the head of the California list in competition.

The principal agricultural industries are wool-growing, dairying, poultry and stock-raising, and the growing of hops, grain and other cereals, potatoes, apples, and fruits of almost all descriptions. Wine-making is very thriving, and new vineyards are constantly coming into bearing.

Dairying is one of the leading interests. There are some up-to-date creameries, with numerous skimming stations. The butter produced is of a very high grade, and finds a ready market.

Stock-raising, grazing, and wool-growing are very much in evidence. There are about 1,000,000 acres of land specially adapted for grazing purposes. The shipments of wool, of a grade second to none, amount to about 1,000,000 pounds per annum.

The Angora goat thrives well, the mountains being an ideal pasture.

Hops are a very prolific crop and of the finest grade.

Crops of wheat, oats, and barley are always certain.

Potatoes and apples of a very fine quality are raised and bring remunerative prices. The apples excel in size and flavor.

The Bartlett pear, nectarine, peach, and fig are grown very successfully. Berries of all descriptions grow abundantly and are of large size and fine flavor.

No irrigation is required, and crops do not suffer from drought at any time.

In the county are large tracts of redwood, covering over 600,000 acres, the lumber cut from which amounts to 100,000,000 feet annually. The lumber mills, in addition to having their logs floated on the streams on which they are situated, have modern railroads extending into the heart of the redwood belt. The largest mill in the interior is at Willits. All employ a large number of persons in the woods, about the shipping points, on their railroads, and in their mills. Shingles, boxes, and other lumber products are manufactured and shipped in large quantities.

Ukiah, the county seat, is located on the California Northwestern Railroad.

Most of the trade is carried by vessels from coast points to San Francisco. The California Northwestern Railroad, connecting with San Francisco, runs 60 miles through the county from south to north.

All the streams abound in trout. Game—quail, grouse, pigeons and deer—is abundant.

Land suitable for agricultural purposes, fruit-growing, etc., can be obtained at reasonable prices.

STATISTICS OF MENDOCINO COUNTY, 1905-6.

General Statistics.

Area, 3,860 square miles, or 2,442,000 acres.	
Number of farms	720
Number of acres assessed	1,516,213
Value of country real estate	$7,284,538
Of improvements thereon	$1,062,454
Of city and town lots	$651,877
Of improvements thereon	$969,056
Of personal property	$2,298,486
Total value of all property	$12,266,411
Number of miles of public roads	855
Road levy per $100, 1906	40 cts.
Value of county buildings	$70,000
Irrigating ditches—miles, 12; cost	$10,000
Railroads, steam—miles, 185; assessed value	$493,000
Electric power plants—11; assessed value	$106,000
Electric power lines—miles, 25; assessed value	$10,000
Number of acres irrigated	2,500

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	18,000	21,000	$500,000
Barley	800	820	18,000
Oats	1,200	500	10,000
Corn	2,200	5,000	140,000
Total cereals	22,400	27,320	$668,000

Cereal Products and Hay—Continued.

	Acres.	Tons.	Value.
Alfalfa hay	1,500	7,000	$56,000
Grain hay	14,000	40,000	440,000
Total hay	15,500	47,000	$496,000

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	6,000,000	$45,000
Asparagus	3,000	150
Blackberries	6,000	450
Beans	10,000	300
Beets	8,000,000	30,000
Cabbage	200,000	4,000
Celery	2,000	100
Cauliflower	5,000	250
Corn	10,000	200
Currants	600	60
Cherries	3,000	300
Figs	40,000	250
Gooseberries	100	10
Grapes	180,000	1,800
Loganberries	6,000	450
Onions	200,000	2,500
Pears	500,000	5,000
Peaches	10,000	3,000
Peas	100,000	2,000
Plums	------	2,000
Irish Potatoes	9,000,000	90,000

STATISTICS OF MENDOCINO COUNTY, 1905-6—Continued.

Fruit, Vegetables, Etc.—Continued.

	Total Production. Pounds.	Value.
Green—		
Quinces	1,000	$50
Raspberries	10,000	1,000
Strawberries	40,000	3,500
Tomatoes	12,000	120
Total value		$192,490
Dried—	Pounds.	Value.
Apples	2,000	$100
Beans	50,000	1,000
Chestnuts	100,000	1,400
Onions	100,000	500
Peas	100,000	1,000
Prunes	50,000	4,500
Walnuts	7,000	700
Totals	409,000	$9,200

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	205,000	45,000	250,000
Apricot	1,000	------	1,000
Cherry	5,100	400	5,500
Fig	1,000	------	1,000
Olive	500	------	500
Orange	200	------	200
Peach	17,000	------	17,000
Pear	33,000	3,000	36,000
Plum	5,000	------	5,000
Prune	75,000	------	75,000
Quince	100	------	100
Walnut	700	400	1,100
Total fruit trees	343,600	48,800	392,400
Table grapes (acres.)	500	------	500
Wine grapes (acres.)	1,500	2,000	3,500
Total acres grapes	2,000	2,000	4,000
Blackberries (acres.)	10	3	13
Currants (acres.)	1	----	1
Gooseberries (acres.)	1	----	1
Loganberries (acres.)	15	----	15
Raspberries (acres.)	15	----	15
Strawberries (acres.)	110	----	110
Total acres berries	152	3	155

Dairy Industry.

	No.	Production.	Value.
Creameries (milk)	12	900,000	$225,000
Skimming stations	2	------	------
Butter (pounds)		300,000	75,000
Cream (gallons)		20,000	8,000

Poultry and Eggs.

	Dozen.	Value.
Chickens	7,000	$21,000
Ducks	100	500
Geese	300	6,000
Turkeys	1,200	20,000
Eggs	200,000	40,000
Total value		$87,500

Wines, Brandies, Etc.

Number of wineries, 7; number of breweries, 1.

	Gallons.	Value.
Wine—Angelica	500	$120
Claret	10,000	1,500
Totals	10,500	$1,620
Beer (barrels)	500	$1,000
Brandy	1,000	1,500
Cider	5,000	450
Vinegar	1,000	100

Fish Industry.

	Pounds.	Value.
Salmon	20,000	$1,600
Other kinds	40,000	2,000
Totals	60,000	$3,600

Forest Products.

	Amount.	Value.
Area of timber lands (acres)	850,000	------
Oak (acres)	100,000	------
Pine (acres)	110,000	------
Redwood (acres)	640,000	------
Sawmills (number)	27	$420,000
Fuel, wood (cords)	400,000	1,200,000
Laths (thousand)	10,000	20,000
Lumber—Pine (feet)	20,000,000	400,000
Redwood (feet)	120,000,000	3,600,000
Tan bark (cords)	12,000	120,000
Pickets (pieces)	400,000	23,000
Piles	1,000	5,000
Posts (pieces)	100,000	9,000
Railroad ties (pieces)	2,500,000	1,000,000
Shakes (thousand)	500	4,000
Shingles (thousand)	100,000	250,000
Total value		$7,051,000

Power used for mills and manufactories in county: Steam—number, 27.

Miscellaneous Products.

	Pounds.	Value.
Bees (hives) No., 500	------	$1,500
Beeswax	120	2
Flowers and plants (acres)	6	3,500
Honey	5,000	500
Hops	2,500,000	312,500

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value. of Product.
Wood boxes	1	6	200,000	$20,000
Brick	5	25	3,000,000	24,000
Cigars	2	6	1,000,000	40,000
Flouring mills (barrels)	3	10	5,000	20,000
Meat products—				
Hides (pounds)		--	200,000	16,000
Lard (pounds)		--	75,000	7,500
Meat packed (tons)		--	150	7,500
Planing mills	3	30	------	100,000
Tanneries	3	9	------	3,000

STATISTICS OF MENDOCINO COUNTY, 1905-6—Continued.

Livestock Industry.	Number.	Value.
Cattle—Beef	4,000	$100,000
Stock	15,000	150,000
Dairy Cows—Graded	320	13,000
Ayrshire	3,000	75,000
Devon	500	2,500
Holsteins	200	10,000
Jersey	3,000	150,000
Red Polled	150	9,000
Calves	8,000	40,000
Swine	11,000	27,000
Horses—		
Thoroughbred	120	120,000

Livestock Industry—Continued.	Number.	Value.
Horses—Common	7,000	$350,000
Standard-bred	200	40,000
Colts	1,750	35,000
Mules	400	32,000
Sheep—		
Imported or fine	30,000	200,000
Common	80,000	250,000
Lambs	7,500	7,500
Angora Goats	2,000	10,000
Common Goats	3,500	10,000
Total stock all kinds	177,640	$163,100

MERCED COUNTY.

Merced County is in the heart of the San Joaquin Valley. The greater part of its area, which is about 90 miles east and west and 40 miles north and south, extends from the foothills of the Sierra Nevada range on the east to the summit of the Coast Range on the west.

With the exception of a small portion of the eastern part, and that situated on the eastern slope of the Coast Range, the county is almost a level plain, broken only by watercourses. The San Joaquin River passes in a northerly and southerly direction almost through the center of the county. To the west of the San Joaquin River are the rolling foothills of the Coast Range. A large number of creeks take their rise in the mountain ranges on both sides of the valley. The principal stream is the Merced River, which, having its source in Mariposa County, in the Yosemite Valley, runs the greater part of its course through Merced, flowing through the entire length of the county, and reaching the San Joaquin on its western border.

On the eastern side of the San Joaquin are bottom and plains lands, skirted on the east by a narrow strip of low foothills. The Merced River bottom has an average width of three miles, with an abrupt bluff on each side.

Irrigation is an absolute necessity over the larger portion of Merced County for the production of fruits, alfalfa, grain, and vegetables. Two of the largest and most complete irrigation systems in the State are owned and operated—one on the east side, the other on the west side, of the San Joaquin River.

Considerable attention is being given to the breeding of dairy stock, and the dairy business has gone ahead with such rapidity that it has become the principal industry. Some of the best equipped creameries in the United States are to be found in Merced County, and some of the recently constructed ones are models of up-to-date factories. The great success of the creamery business is not only based upon good markets and shipping facilities, coupled with thorough manufacturing processes, but also, and especially, is due to the great alfalfa-growing industry.

One acre and a half of some land will produce ten tons of alfalfa hay and support one cow, whose milk will sell for $40 at the creamery, one calf worth $10, and two pigs worth $20.

Merced County is the natural sweet potato belt of the State. In the county are several thousand acres of land that seems to be peculiarly adapted to their growth, as experience has demonstrated. Cereals of most kinds are raised, and even with its other great resources it is one of the leading wheat, barley, and corn producers.

Alfalfa grows prolifically, and produces four crops a year, besides pasturage. Table, raisin, and wine grapes find a natural home. Orange, lemon, olive, and fig trees thrive well, while apples, cherries, peaches, apricots, prunes, pears, nectarines, quinces, and persimmons

are very profitable. The smaller fruits, such as strawberries, blackberries, raspberries, currants, and gooseberries, yield abundantly. Walnuts, chestnuts, pecans, almonds, and peanuts are easily raised.

A commercial product is buhach, from which the celebrated insect powder is manufactured and sent all over the United States. Over 300 acres are devoted to the growing of the pyrethrum plant.

The Chowchilla Ranch and Pastoral Company, located near the city of Merced, is extensively engaged in the raising of pure-bred and grade shorthorn cattle. The herd of thoroughbred Durham cattle on the Howard ranch is second to none in the State. There are also large flocks of pure-bred and high-grade Merino sheep. The raising and fattening of hogs for market has proved very profitable. Poultry-raising is a paying industry. Climatic conditions are favorable to the raising of chickens.

Merced is the county seat. It has fine educational facilities and modern systems of sewers and water supply, and is lighted by electricity. It is the starting point, via the Coulterville route, to the world-famed Yosemite Valley. Merced Falls, Snelling, LeGrand, Dos Palos, Volta, Los Banos, Atwater, and Cottonwood are thriving towns, located in districts with surroundings of unexceptional fertility.

Merced County is traversed by two transcontinental railroads, viz: the Southern Pacific and the Santa Fé.

The settlement of land by colonization has resulted very successfully. No more successful colonies can be cited than those of Dos Palos, the Rotterdam, the Pioneer, El Capitan, and the British, all regularly laid out in tracts of five, ten, and twenty acres. Diversified farming is practiced, and comfortable homes and thrifty farms are the result.

STATISTICS OF MERCED COUNTY, 1905-6.

General Statistics.

Area, 2,000 square miles, or 1,280,000 acres.	
Number of farms	1,825
Number of acres assessed	1,176,200
Value of country real estate	$9,467,348
Of improvements thereon	$699,439
Of city and town lots	$533,417
Of improvements thereon	$750,215
Of personal property	$2,094,366
Total value of all property	$13,544,785
Expended on roads, and for bridges, last fiscal year	$51,613
Number of miles of public roads	940
Road levy per $100, 1906	40 cts.
Value of county buildings	$187,000
Irrigating ditches—miles, 151½; cost	$308,883
Railroads, steam—miles, 129.81; assessed value	$2,226,811
Electric power plants—1; assessed value	$16,950
Electric power lines—miles, 18½; assessed value	$20,612
Number of acres irrigated for feed, alfalfa, and fruit	146,095

Dairy Industry.

	Production.	Value.
Creameries, 3.		
Butter (pounds)	569,084	$102,435
Cream (pounds)	5,060,110	910,819

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	65,000	13,626	$327,024
Barley	102,500	38,709	719,987
Oats	21,500	5,073	121,752
Rye	5,000	300	7,800
Corn	2,500	1,350	32,400
Total cereals	196,500	59,058	$1,208,963
Alfalfa hay	19,148	114,888	$574,440
Grain hay	20,506	22,000	99,000
Total hay	39,654	136,888	$673,440

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	3,477	2,500	5,977
Apricot	9,250	3,120	12,370
Cherry	210	215	425
Fig	7,325	10,925	18,250
Lemon	385	204	589
Nectarine	590	76	666
Olive	1,620	2,730	4,350
Orange	2,050	1,294	3,344
Peach	68,950	75,324	144,274
Pear	5,200	4,020	9,220
Plum	2,115	430	2,545
Prune	12,780	760	13,540

STATISTICS OF MERCED COUNTY, 1905-6—Continued.

Fruit Trees and Vines—Continued.

	Bearing.	Non-Bearing.	Total.
Quince	529	600	1,129
Almond	18,750	5,135	23,885
Chestnut	20	39	59
Pecan	5	18	23
Walnut	725	1,107	1,832
Hazel nuts	3	----	3
Japanese persimmons	15	----	15
Total fruit trees	133,999	108,497	242,496
Raisin grapes (acres.)	275	118	393
Table grapes (acres.)	225	123	348
Wine grapes (acres.)	839	120	959
Total acres grapes	1,339	361	1,700
Blackberries (acres.)	20	5	25
Loganberries (acres.)	13	4	17
Strawberries (acres.)	10	--	10
Total acres berries	43	9	52

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	174,000	$1,740
Apricots	95,710	1,914
Asparagus	2,000	1,016
Blackberries	105,000	5,500
Beans	20,000	1,200
Cabbage	61,210	500
Celery	8,800	440
Corn	150,000	2,250
Figs	41,175	617
Grapes	5,091,600	40,732
Lemons (boxes)	253	1,012
Loganberries	93,000	5,525
Nectarines	2,000	20
Onions	10,000	500
Oranges (boxes)	1,640	3,280
Olives	100,000	4,000
Pears	195,000	1,950
Peaches	1,349,310	20,279
Peas	20,000	800
Persimmons	250	10
Plums	236,750	2,367
Irish potatoes	547,362	6,842
Sweet potatoes	8,631,920	99,267
Quinces	20,000	200
Strawberries	23,000	1,520
Tomatoes	763,675	2,955
Total value		$206,436

Dried—	Pounds.	Value.
Almonds	66,155	$8,269
Apples	2,100	147
Apricots	25,600	2,048
Beans	194,500	4,863
Corn	1,253,100	14,410
Figs	343,700	10,311
Onions	91,276	912
Pears	4,500	315
Peaches	151,115	12,089
Prunes	480,960	14,428
Raisins	600	30
Walnuts	7,475	1,121
Totals	2,621,081	$68,943

Fruit, Vegetables, Etc.—Continued.

Canned—	Cases.	Value.
Beans	200	$1,200
Peaches	10,000	25,000
Tomatoes	1,250	2,000
Totals	11,450	$28,200

Wines, Brandies, Etc.

Number of wineries, 1; number of distilleries, 2.

	Gallons.	Value.
Wine—Claret	23,950	$3,592
Malaga	200	50
Port	75,000	22,500
Sherry	250	75
Totals	99,400	$26,217
Brandy	3,030	$3,030
Cider	300	150
Vinegar	500	250

Livestock Industry.

	Number.	Value.
Cattle—Beef	1,078	$43,120
Stock	36,500	547,500
Thoroughbred	350	17,500
Dairy Cows—Graded	16,950	678,000
Calves	9,150	64,050
Swine	20,130	161,040
Horses—		
Thoroughbred	15	7,500
Standard-bred	4,550	318,500
Common	1,225	42,875
Colts	1,235	18,525
Mules	2,950	295,000
Sheep—Imported	750	3,750
Sheep—Common	95,235	333,322
Lambs	53,225	53,225
Angora Goats	3,000	7,500
Common Goats	2,020	2,020
Total stock all kinds	248,363	$2,593,427
Wool (pounds)	761,880	$106,663

Poultry and Eggs.

	Dozen.	Value.
Chickens	4,615	$18,460
Ducks	122	732
Geese	15	135
Turkeys	734	22,020
Eggs	169,504	42,376
Total value		$83,723

Miscellaneous Products.

	Pounds.	Value.
Bees (hives) No., 2,200	------	$3,300
Beeswax	1,000	300
Honey	60,000	4,500

Productions Shipped Out of State.

	Sacks.	Value.
Sweet potatoes	61,728	$74,536

STATISTICS OF MERCED COUNTY, 1905-6—Continued.

Manufactories.

	No.	Quantity Produced.	Value of Product.
Brick (thousand)	3	2,500	$15,000
Flouring mills (barrels)	1	20,000	80,000
Meat products—Hides		6,500	26,000
Tallow (pounds)		50,000	2,500
Olive oil (gallons)		650	1,300

Manufactories—Continued.

	No.	Quantity Produced.	Value of Product.
Pickled olives (gallons)		1,500	$1,050
Sugar corn (sacks)		600	600

Power used for mills and manufactories in county: Electrical—number, 1; water—number, 1.

MODOC COUNTY.

Modoc County lies in the extreme northeastern corner of California. The county is a succession of mountain ranges and valleys branching off from the Sierra Nevada Mountains, the principal spur of which is the Warner Range. It is principally drained by Pitt River, which flows into the Sacramento, near Redding, Shasta County. The lava-bed section occupies over one half the total area. The county has two large lakes, but barring the lakes and the large cattle ranges it is sparsely settled.

The valleys are the principal features, the leading ones being Surprise, Goose Lake, Hot Springs, Jess, Big, and Little Hot Springs.

Wheat, barley, fruit, vegetables, and hay are the leading staples. Thousands of acres are in alfalfa, and the stock and dairying industries are thriving. Every ranch has a fine orchard, and ranch houses and barns, costing $5,000 or $6,000 in total improvements, are not uncommon. Trees, both shade and ornamental, abound around every place.

The climate is that of the temperate zone, and the products are those of the great intermountain region which stretches from the Sierra to the western plains of Kansas. Snow falls in the valleys and much deeper in the mountains, forming the principal supply of moisture for the development of the country. Stock is usually fed for several months through the winter, although it is not always necessary so to do. The thermometer will sometimes run below zero for a few days in the winter, but not for very long, and 90° is extreme heat for summer. Even in summer the evenings are cool and delightful.

The county is well watered. Surprise Valley has nearly twenty streams, which run both winter and summer. Goose Lake Valley is equally fortunate, while the Pitt River supplies water for many farms and ranches. Many springs exist, especially in the mountains; and in Surprise Valley there are many artesian wells.

The timber of the county is pine and fir in the Warner Range, and sugar pine in the western part.

Horticulture has had but a small place in the industries, only sufficient fruit for home uses being raised. However, the gradual approach of the railroad running north from Reno, Nevada, will increase the productivity in this line immensely, as the county is well adapted to apples, pears, and berries. The wild plum is about the only native fruit. The cultivated fruits were brought in the earlier days from Eastern States by the immigrants who came across the plains. A great deal of orchard planting has been done within the last few years.

The last five years have seen a great deal of reservoir work undertaken throughout the county and its tributary valleys. The rains come in time to insure abundant harvests year after year.

The nearest railroad point to Alturas, the county seat, is Madeline, in Lassen County. Daily trains are run from Madeline to Reno, Nevada.

There are flouring-mills located at Bidwell, Lake City, Cedarville, New Pine Creek, Alturas, and Adin. There are sawmills located at Bidwell, Cedarville, Eagleville, Willow Ranch, Davis Creek, Jess Valley, Alturas, Adin, and Widow Valley.

STATISTICS OF MODOC COUNTY, 1905-6.

General Statistics.

Area, 4,097 square miles, or 2,622,080 acres.	
Number of acres assessed	330,719
Value of country real estate	$2,436,466
Of improvements thereon	$431,418
Of city and town lots	$65,478
Of improvements thereon	$221,884
Of personal property	$1,314,444
Total value of all property	$4,469,690
Expended on roads, last fiscal year	$16,361
Expended for bridges, last fiscal year	$600
Number of miles of public roads	745
Road levy per $100, 1906	35 cts.
Value of county buildings	$13,950
Irrigating ditches—miles, 325; cost	$14,750

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	6,132	4,054	$75,640
Barley	3,346	2,247	46,070
Oats	276	133	3,722
Rye	208	74	2,136
Corn	7	2	200
Total cereals	9,969	6,510	$127,768
Alfalfa hay	4,843	10,846	$53,385
Grain hay	1,213	1,716	8,445
Grass hay	25,551	40,504	184,989
Total hay	31,607	53,066	$246,809

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	606,720	$11,538
Apricots	10,450	418
Blackberries	4,400	880
Beans	80,370	5,516
Beets	514,370	3,272
Cabbage	233,250	3,596
Corn	10,930	425
Currants	1,025	50
Cherries	6,050	865
Gooseberries	2,430	121
Loganberries	1,940	97
Onions	85,610	1,619
Pears	22,310	556
Peaches	7,850	258
Peas	275	105
Plums	3,220	325
Irish potatoes	1,041,600	11,538
Prunes	1,900	190
Raspberries	5,190	501
Strawberries	12,145	1,173
Tomatoes	99,960	2,961
Totals	2,751,995	$45,804

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	18,700	1,742	20,432
Apricot	313	120	433
Cherry	675	272	947
Peach	1,116	487	1,603
Pear	1,172	269	1,441
Plum	1,357	203	1,557
Prune	968	37	1,055
Total fruit trees	23,301	3,130	27,468

Wines, Brandies, Etc.

Number of breweries, 1.

	Gallons.	Value.
Beer (barrels)	90	$1,395
Vinegar	830	415

Livestock Industry.

	Number.	Value.
Cattle—Beef	9,000	$210,467
Stock	30,903	275,332
Dairy Cows—Graded	474	12,850
Herefords	5	250
Shorthorns	243	22,650
Calves	7,883	67,026
Swine	4,806	22,864
Horses—		
Thoroughbred	14	10,050
Common	5,663	210,770
Colts	894	17,166
Mules	522	32,995
Sheep—Imported or fine	65	1,025
Common	43,041	166,229
Lambs	13,938	35,775
Common Goats	297	955
Total stock all kinds	117,748	$886,400
Wool (pounds)	146,060	30,002
Mohair (pounds)	550	142

Poultry and Eggs.

	Dozen.	Value.
Chickens	1,174	$3,863
Ducks	5	22
Geese	7	92
Turkeys	129	3,903
Eggs	31,725	5,991
Total value		$13,871

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value of Product.
Flouring mills (barrels)	2	6	3,950	$17,300
Leather goods	1	2	....	4,000
Lime (barrels)	..	..	150	750
Hides (pounds)	..	..	7,000	1,330
Lard (pounds)	..	..	4,000	800
Planing mills	1	..	....	.....
Artificial stone	1	6	....	.....

STATISTICS OF MODOC COUNTY, 1905-6—Continued.

Dairy Industry.

	No.	Production.	Value.
Creameries	1		
Butter (pounds)		22,121	$5,530

Miscellaneous Products.

	Pounds.	Value.
Bees (hives), No., 716	------	$1,755
Beeswax	315	63
Honey	14,530	1,453
Alfalfa seed	335,300	35,159
Sugar beets (tons)	1,000	15,000

Forest Products.

	Amount.	Value.
Area of timber lands—		
Pine (acres)	2,130	------
Sawmills (number)	3	$7,500
Lumber—Pine (feet)	3,173,000	191,100
Shakes	52,000	2,080
Shingles	325,000	11,375
Total value		$212,055

Power used for mills and manufactories in county: Steam—number, 5; electrical—number, 3; water—number, 2.

MONO COUNTY.

Mono is a long, narrow county lying on the eastern slope of the Sierras, its greatest length bordering on the State of Nevada, which forms its northeastern boundary; its general direction being southeast and northwest.

The general contour is mountainous and very rough, all but 400 square miles, or less, being mountainous. The western portion lies among the Sierra Nevada Mountains, along their summit, the heights being clad in snow, and the slopes of the range being covered with forest trees.

Among the highest peaks are Mount Dana, 13,627 feet; Mount Lyell, 13,217 feet; and Castle Peak, 13,000 feet. The greater portion of the population is in the eastern part, in the valleys and the mining camps in the surrounding mountains. This portion, which has always been considered a strange, mysterious country, is of a desert-like, volcanic character, abounding in salt pools, alkali, and volcanic table-lands, its character being significantly indicated by some of the local names, such as Hot Springs, Geysers, Sulphur Springs, Black Lake, Soda Pond, Volcano, Obsidian Mountain, Deep Cañon, Volcanic Tableland, Red Crater, Adobe Meadows, and Oasis.

Mono Lake, the "Dead Sea of America," is one of the attractions, and situated in the center of the county; it is about 12 miles long and 8 miles wide; its waters are a somewhat unusual compound, various chemical substances being found in solution in them. Several attempts have been made to utilize this water without success. This lake has all the appearances of having once been the scene of volcanic action. The country surrounding it, as Bodie, Aurora, Lundy, Tioga, and Benton, abounds in minerals. The lake has a number of small streams flowing into it, but is without a perceptible outlet.

Owens River in the south, which takes its rise in a high peak in the Sierras, and Kitten and Walker rivers in the north, are the principal streams. One passes through the southern part into Inyo County. The other, after rising in Mono County, continues its course into the State of Nevada. These two streams with their branches, together with the small streams that flow into Mono Lake, furnish the principal water supply for irrigation.

The retaining of the snow in the high mountains, at the sources of the streams used for irrigation, until later in the season, assures an abundance of pasturage on the mountain ranges, which are thronged with vast herds of cattle and bands of horses and sheep that are brought from the lower sections to graze during the summer.

That portion of the valley soil lying contiguous to the streams is very rich. A great deal of the sagebrush land, formerly considered barren, is found to be very productive when placed under cultivation. Thus the area of tillable land has been vastly increased within the last few years, and wherever water can be got on to the land, even well up

on the foothills, there are farms that are making comfortable homes for their owners.

The agricultural resources are chiefly confined to the raising of hay and the hardier cereals and vegetables for home consumption. The small surplus finds a ready market in the mining camps. Apples raised in the lower valleys are of superior quality and flavor and thrive well. Plums and peaches are grown on a limited scale. Berries also do well, considering the high altitude.

Grazing is the leading industry, and the pasturage is good and plentiful. Herds of dairy cattle are moved from the valleys during the summer, and an excellent product of butter is made. Large bands of sheep are also driven to its mountains for summer pasturage. Goats, hogs, horses, poultry, and mules are raised in large numbers.

The timber belt is very large and the product of good marketable quality, but as there is no means of transportation to market, the development of the lumber interests is retarded, although considerable quantities are used for local mining purposes.

Bridgeport is the county seat, and is located in a prosperous farming section.

Considerable mining for precious metals is carried on, the leading camp being Bodie. This industry is again prosperous. The introduction of the cyanide process, and the installing of electric power plants on the several streams of the county, thereby furnishing cheap power, make it possible to work at a profit large bodies of low-grade ore that heretofore were of no value, on account of cost of reduction.

STATISTICS OF MONO COUNTY, 1905-6.

General Statistics.

Area, 2,796 square miles, or 1,789,440 acres.	
Number of farms	170
Number of acres assessed	170,054
Value of country real estate	$484,076
Of improvements thereon	$192,934
Of city and town lots	$17,640
Of improvements thereon	$85,840
Of personal property	$200,945
Total value of all property	$981,435
Expended on roads, last fiscal yr.	$2,909
Expended for bridges, last fiscal year	$725
Number of miles of public roads	292
Road levy per $100, 1906	30 cts.
Value of county buildings	$45,600
Railroads, steam—miles, 68; assessed value	$90,015
Electric power plants—2; assessed value	$26,000
Electric power lines—miles, 12; assessed value	$4,000
Number of acres irrigated	10,710

Balance grazing and mineral lands.

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	192	----	192
Cherry	38	----	38
Peach	40	----	40
Pear	20	----	20
Plum	24	----	24
Total fruit trees	314	----	314
Table grapes (acres)	2	----	2

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	30	18	$450

Livestock Industry,

	Number.	Value.
Cattle—Beef	500	$10,000
Stock	1,868	18,680
Dairy Cows—Graded	276	6,900
Calves	491	2,455
Swine	129	645
Horses—		
Standard-bred	2	800
Common	1,361	26,640
Colts	138	1,570
Mules	30	900
Sheep—Common	5,573	11,565
Common Goats	220	264
Total stock all kinds	10,588	$80,419

Wool, 56,730 pounds.

Miscellaneous.

Mono County reports two sawmills, worth $5,500, that turn out annually 300,000 feet of lumber, worth $3,600.

The county has 162 dozen chickens, worth $810, and 309 beehives, worth $609.

The mineral output is given as: gold, $308,884, and silver, $11,240.

There were 297 vehicles made in the county last year, worth $9,560.

MONTEREY COUNTY.

Monterey County is situated about 100 miles south of San Francisco, and 500 miles north of Los Angeles, on the Pacific coast. It is 124 miles long and 45 miles wide, its extreme length being from north to south.

Owing to the peculiar topography, with its rough mountains and broad plains, its great river running from south to north, with tributaries from either side, its rolling hills and rugged mountains, it is found to be a miniature of the State, with its entire diversity of climate and soil, enabling it to yield everything produced in the State, and rendering it one of the most desirable regions for settlement.

Its rivers furnish a never-failing supply of water for irrigation, and the mountains abound in minerals—gold, silver, copper, coal, bitumen, and oil.

The county is divided into three sections—the mountains and hills on the east, mountains and hills on the west, and the great Salinas Valley situated between these ranges of mountains.

The portion of Pajaro Valley lying south of the Pajaro River, and running to Monterey Bay on the southwest, is in Monterey County, and is about 15 miles long, and from 6 to 8 miles wide. The land is exceedingly fertile and under a thorough system of cultivation, producing immense crops of all kinds of vegetables, grain, fruit, and berries. Well-tilled farms greet the eye, and villages, school houses, churches, and picturesque residences dot the landscape in every direction. The foothills are covered with flocks and herds, and the lower ranges are timbered with live oak. The Pajaro River flows southwesterly and finds an outlet in Monterey Bay, near the mouth of the Salinas River.

The great Salinas Valley opens out on Monterey Bay and extends southward 100 miles, with an average width of 10 miles; therefore its area is about 1,000 square miles, or 640,000 acres. The Salinas River flows through its entire length. The land may be divided into three classes, viz: First, the heavy, rich bottom lands, which produce almost everything, the soil being sediment and black adobe, which often contains just enough sand to make it work easily. Second, the mesa or table-lands, particularly adapted to growing wheat, barley, and other cereals. Third, the uplands and slightly rolling hills, some of which are the finest fruit lands in California, and will produce oranges, lemons, grapes, peaches, apricots, almonds, walnuts, figs, apples, plums, pears, berries, and all other fruits common to the State.

Nearly all semi-tropical fruits do well in some part of this county, especially in the thermal belt along each side of Salinas Valley. A number of orange and lemon trees in yards of Salinas City hang full of fruit each year and are never injured by frost.

In barley, beets, and carrots, this valley can not be surpassed.

Going south, wheat excels; and grapes, peaches, prunes, apricots,

cherries, and almonds grow to perfection in the foothills, cañons, and small valleys, and figs do well in sheltered places.

Olive trees flourish with all the vigor they possess in their native country. Currants, gooseberries, blackberries, loganberries, and raspberries grow luxuriantly. Strawberries are in the market all the year round, and are shipped from Pajaro by carloads. Grapes grow to perfection everywhere in the county, except in the heavy bottom lands of the lower Salinas Valley.

As to potato-raising, the Salinas Valley has no equal; here is the home of the famous Salinas Burbanks that are in such great demand all through the northwest, and thousands of sacks are shipped to the Philippine Islands. As high as four hundred bushels to the acre have been raised near Salinas.

Dairying is a very prominent, if not a leading industry, most of the dairies being devoted to butter-making. Some of the finest dairies in the State are in Monterey County, and some of the best butter in the State is made here. They have the latest and best improved machinery, and have found their business very profitable.

Extensive work has been done in the last few years in bringing the valley under a thorough system of irrigation. Opposite Soledad, on the south side of Salinas River, considerable irrigation is done around Fort Romie on lands purchased by the Salvation Army, and sold on most favorable terms to worthy poor in need of homes. This is one of the most prosperous colonies in America. Around the Spreckels sugar factory, 4 miles from Salinas City, a great deal of land has been irrigated for raising beets. This is the largest beet-sugar factory in the world.

The main transcontinental line of the Southern Pacific Railroad enters this county through Pajaro Valley on the north, and runs southeast through its entire length, paralleling the Pajaro and Salinas rivers.

Pajaro is the great shipping point for apples, berries, all fruits, and dairy products of its section.

Hotel Del Monte, "the queen of American watering-places," including the main structure and two annexes, together with the connecting wings, is simply immense, and everything connected with the establishment is on the same magnificent scale. The grandeur of the hotel is repeated in the grounds, which cover 140 acres laid out in lawns, flower-beds, parks, and groves, and the landscape gardening is a marvel of beauty.

A little farther on is Monterey, situated on the beach of Monterey Bay, lying back on her sloping hills, and overlooking the placid waters of the bay—one of the grandest and most beautiful townsites nature ever formed.

Two miles farther on is Pacific Grove. Nestled among the pines is this little town, with beautiful streets, magnificent cottages, fine churches and school houses, charming drives, and with never a saloon in its sacred limits.

The harbor of Monterey Bay is second in importance on the coast. The largest battleships of our navy find anchorage within 100 feet of the shore, and during heavy storms at sea it is not unusual to see many ships of different nations anchored in the calm waters of the bay. The fishing is incomparable for quantity and variety, and a cannery is located at Monterey. There is an abalone canning factory located at Point Lobos, and one at Point Sur. Monterey Bay contains about one hundred and fifty species of food fish, and many are annually taken

for market. There is a whaling company at Monterey, and some seasons many whales are captured.

Salinas City, the county seat, is in the heart of the best portion of Salinas Valley, the head of the first division of the railroad, near the Spreckels sugar factory, and containing extensive gas and water works, a large flouring-mill, a large creamery, a planing-mill, and shops, banks, churches, and school houses. There are many magnificent residences and well-improved streets. Fraternal societies are well represented.

Soledad, named for Soledad Mission, is in another wheat belt, and is an important shipping point for grain and dairy products. It is the nearest point to Paraiso Springs, whose waters contain medicinal properties of a high order.

The narrow-gauge railroad from Pajaro to Salinas parallels the main line on the west, taps Monterey Bay at Moss Landing—where there are extensive warehouses and lumber yards, and where the coast vessels stop regularly for grain and merchandise—then continues to Spreckels's sugar factory, and is used principally for hauling beets to the factory and lime rock from the quarries, though considerable grain is shipped by it from the region west of Salinas.

STATISTICS OF MONTEREY COUNTY, 1905-6.

General Statistics.

Area, 2,977 square miles, or 476,320 acres.
Number of farms 3,407

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	47,230	23,072	$563,584
Barley	104,050	56,291	723,861
Oats	12,660	5,520	160,540
Rye	100	50	1,000
Corn	400	300	5,500
Total cereals	164,440	85,233	$1,454,485
Alfalfa hay	825	5,400	$38,500
Grain hay	32,780	40,384	303,508
Total hay	33,605	45,784	$342,008

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	270,570	95,870	366,440
Apricot	31,345	6,360	37,705
Cherry	3,850	100	3,950
Fig	600	50	650
Lemon	75	15	90
Nectarine	800	75	875
Olive	6,550	500	7,050
Orange	150	20	170
Peach	6,097	790	6,887
Pear	17,830	2,160	19,990
Plum	2,500	100	2,600
Prune	33,000	150	33,150
Quince	150	25	175
Other kinds	250	25	275
Almond	9,530	500	10,030
Chestnut	20	50	70
Pecan	10	5	15
Walnut	3,430	650	4,080
Other nuts	25	10	35
Total fruit trees	386,782	107,455	494,237

Fruit Trees and Vines—Continued.

	Bearing.
Table grapes (acres)	130
Wine grapes (acres)	170
Total acres grapes	300
Blackberries (acres)	160
Currants (acres)	1
Gooseberries (acres)	1
Loganberries (acres)	72
Raspberries (acres)	92
Strawberries (acres)	360
Total acres berries	686

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	61,667,000	$626,685
Apricots	508,700	13,258
Asparagus	10,000	600
Blackberries	1,504,000	45,120
Beans	3,184,500	62,457
Beets	450,804,000	1,116,620
Cabbage	8,000	620
Celery	3,500	165
Cauliflower	500	15
Corn	36,000	3,010
Currants	500	15
Cherries	271,000	8,150
Figs	100	3
Grapes	20,000	200
Loganberries	561,000	19,630
Nectarines	2,000	40
Onions	738,000	73,800
Oranges (boxes)	10	15
Olives	120,000	12,000
Pears	1,020,750	12,920
Peaches	378,400	9,952
Peas	21,250	650
Plums	5,000	50
Irish potatoes	19,160,500	191,407
Sweet potatoes	500	10

STATISTICS OF MONTEREY COUNTY, 1905-6—Continued.

Fruit, Vegetables, Etc.—Continued.

Green—	Total Production, Pounds.	Value.
Prunes	608,000	$9,240
Quinces	500	10
Raspberries	585,500	26,335
Strawberries	3,501,000	175,020
Tomatoes	29,500	685
Total value		$2,408,682

Dried—	Pounds.	Value.
Almonds	4,000	$400
Apples	1,000	100
Apricots	3,000	300
Beans	13,700	410
Corn	100	10
Figs	100	10
Nectarines	300	15
Pears	1,000	50
Peaches	1,000	50
Prunes	4,000	200
Walnuts	1,000	100
Totals	29,200	$1,645

Canned—	Cases.	Value.
Apples	50	$50
Apricots	40	40
Blackberries	40	40
Cherries	10	12
Grapes	100	100
Nectarines	20	20
Pears	75	75
Peaches	150	150
Plums	50	50
Raspberries	50	50
Strawberries	50	50
Tomatoes	75	75
Totals	710	$712

Poultry and Eggs.

	Dozen.	Value.
Chickens	16,002	$64,260
Ducks	175	775
Geese	135	810
Turkeys	240	3,480
Eggs	737,125	110,656
Total value		$179,981

Miscellaneous Products.

	Pounds.	Value.
Bees (hives)—No., 1,250		
Honey	16,500	$1,700
Sugar beets (tons)	120,003,500	314,000

Fish Industry.

	Pounds.	Value.
Salmon	606,000	$24,240
Sardines	600,000	4,500
Mackerel	40,000	3,000
Totals	1,246,000	$31,740

Wines, Brandies, Etc.

	Gallons.	Value.
Claret wine	1,000	$100
Vinegar	200	20

Livestock Industry.

	Number.	Value.
Cattle—Beef	49,585	$426,275
Stock	43,689	821,480
Thoroughbred	100	5,000
Dairy Cows—Graded	8,170	238,850
Holsteins	235	7,225
Jersey	20	600
Calves	11,114	50,470
Swine	19,233	99,630
Horses—Thoroughbred	49	20,300
Standard-bred	350	165,000
Common	20,178	798,865
Colts	4,806	201,120
Mules	483	32,550
Sheep—Imported or fine	50	500
Common	40,025	111,050
Lambs	5,500	10,600
Angora Goats	3,000	17,500
Common Goats	1,300	3,400
Total stock all kinds	207,887	$3,010,415
Wool (pounds)	208,400	$24,988
Mohair (pounds)	17,900	4,220

Dairy Industry.

	No.	Production.	Value.
Creameries	13		
Butter (pounds)		2,662,150	$634,930
Cheese (pounds)	4	1,762,000	256,200
Cream (gallons)		213,400	5,200

Forest Products.

	Amount.	Value.
Area of timber lands—Redwood (acres)	3,000	
Sawmills (number)	1	$2,500
Fuel, wood (cords)	4,000	16,000
Lumber, redwood (feet)	300,000	3,000
Pickets (pieces)	10,000	500
Posts	155,000	12,700
Total value		$34,700

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value of Product.
Brick	1	15	550,000	$5,500
Cigars	1	3	75,000	525
Flouring mills (bbls.)			80,000	240,000

Productions Shipped Out of State.

	Amount.
Barley	7,000 tons
Wheat	5,000 tons
Apples, fresh	753,000 boxes
Cherries, fresh	5,000 boxes

NAPA COUNTY.

Napa County lies in a northeasterly direction from San Francisco, its county seat, Napa, being about 40 miles from San Francisco and about 70 miles southwesterly from Sacramento. Though one of the smallest, it is one of the most important counties of the State, on account of its proximity to the great market of San Francisco, with which it has several lines of rail and water communication, the variety and wealth of its agricultural, mineral, and manufactured products, the fertility of its soil, the salubrity of its climate, and the excellence of its educational facilities. The length is about 50 miles, and its width varies from 30 to 35 miles.

Spurs of the Coast Range Mountains having a northwesterly trend divide the county into several valleys and afford a variety of scenery of unsurpassed beauty. The western boundary runs for its entire length from San Pablo Bay to Mount St. Helena, along the top of one of these ridges. The only valley of importance intersecting the slope of this western range is Brown's Valley, a productive glen that lies west of Napa City and contains many pretty suburban homes. East of this range, extending for almost the entire length of the county, lies the beautiful Napa Valley, varying in width from 1 to 5 miles, and opening at its lower end into a wide, fanlike expanse of tule land. Mount St. Helena, at the head of this valley, rears its summit nearly 4,500 feet above the level of the sea. The valley is watered by numerous streams that flow from the mountains and find their way into Napa River, which flows the entire length of the valley, and is navigable for steamers and sailing craft as far as Napa City.

The northeastern half of the county is broken by ranges of high mountains into several valleys, of which Berryessa, the most easterly, is the largest.

The rainfall averages so well that a shortage of crops is unknown. The influence of the ocean breeze is felt during the summer to an extent amply sufficient to temper the sun's heat, while the hills act as a barrier against the fogs. The foothills are especially famed for their climatic features, and here are some of the most noted health resorts in the State.

The soil may be divided into five classes. The first class, termed argillaceous, is common to the mountains on the east side of the county, and is not very productive. The second class, adobe, does not exist to any great extent. The best soil is the loam, which may be found in all the valleys, but principally in Napa. Tule soil is found from Napa City southward, and along the margin of the bay. The last class is lava, a decomposed volcanic formation, and is excellent for vineyards. It is found in the vicinity of Howell Mountain.

As the climate of Napa Valley corresponds strikingly in its main features to that of the south of France, grape-growing, wine-making,

and horticulture are followed with great success. The olive, which requires a temperate climate, and dreads equally excessive hot or cold weather, thrives remarkably, and has been largely planted on stony hillsides that would be almost useless for other fruits. The oil and pickled olives manufactured are not excelled by any other domestic or imported product.

Napa County at one time led the State in the amount of wine produced, but the ravages of the phylloxera caused the death of many of the finest vineyards, and curtailed the production of grapes. Some of these vineyards have been replanted with resistant vines, and thus the output of wine is increasing.

The raising and curing of French prunes has been brought to a high state of excellence. Cherries and peaches are successful crops, and walnuts, almonds, apricots, pears, and apples thrive in all sections. While Napa County makes no claims to general adaptability to the culture of citrus fruits, there are few orchards that do not contain a number of orange and lemon trees to provide for the use of the family and for local sale. The output is uniformly of fine quality. Berries of all kinds thrive, and form a very material part of the produce.

Diversified farming is carried on on a large and profitable scale, the nature of the crops raised depending upon the character of the soil. The hay crop is generally large, and, being near to market, finds a profitable sale. Wheat, oats, barley, and corn are raised on a large scale, particularly in the eastern valleys. Potatoes, asparagus—in fact, vegetables of all kinds—do well. All the crops are raised without irrigation, the rainfall being ample, even in the driest years, to insure a good crop.

More and more attention is being paid, year after year, to dairying and stock-raising, and also to poultry-raising.

Napa County has always been noted for the fine horses that its farms produce. The most complete establishment devoted exclusively to the breeding of thoroughbred horses, the Napa Stock Farm, has several high-class imported stallions, and over sixty thoroughbred mares.

Quicksilver, magnesite, mineral waters, and building stone are produced in large quantities.

Napa City is situated at the head of navigation on Napa River. It is chiefly interested in the manufacture of leather and leather goods. There are tanneries, glove factory, shoe factory, woolen mill, and many other industries. It has excellent streets and buildings, fine schools and numerous churches. The State Hospital is located a short distance from the city. At Yountville, 9 miles from Napa, is the State home for volunteer soldiers.

St. Helena, farther up the valley, is the second town in size, and is chiefly devoted to the wine-making industry. It is also the business center for Pope Valley. Here is situated the St. Helena Sanatorium and the health-food factory.

Napa County is famous for the excellence of its roads and the size and number of its stone bridges. All the main county roads are sprinkled in the summer, and rural delivery routes carry the daily mail to the doors of the country people.

STATISTICS OF NAPA COUNTY, 1905-6.

General Statistics.

Area, 800 square miles, or 512,000 acres.	
Number of farms	1,292
Number of acres assessed	405,678
Value of country real estate	$5,181,285
Of improvements thereon	$2,661,975
Of city and town lots	$1,216,575
Of improvements thereon	$2,114,840
Of personal property	$2,301,980
Total value of all property	$13,476,655
Expended on roads, last fiscal yr.	$23,886
Expended for bridges, last fiscal year	$15,000
Number of miles of public roads	453
Road levy per $100, 1906	32 cts.
Value of county buildings	$130,000
Railroads, steam—miles, 53; assessed value	$859,614
Railroads, electric—miles, 7; assessed value	$80,650
Electric power lines—miles, 9; assessed value	$4,960
Number of stone bridges	100

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	2,000	1,200	$36,000
Barley	4,000	2,200	55,000
Oats	6,000	3,900	124,800
Corn	7,000	7,525	173,075
Total cereals	19,000	14,825	$388,875
Alfalfa hay	150	450	$2,250
Grain hay	15,600	27,300	245,700
Total hay	15,750	27,750	$247,950

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	47,000	6,000	53,000
Apricot	14,000	800	14,800
Cherry	35,000	2,000	37,000
Fig	1,200	------	1,200
Lemon	500	------	500
Nectarine	200	------	200
Olive	40,000	------	40,000
Orange	3,500	200	3,700
Peach	112,000	6,500	118,500
Pear	60,000	1,000	61,000
Plum	140,300	30,500	170,800
Prune	435,900	91,500	527,400
Quince	600	250	850
Almond	45,000	300	45,300
Walnut	9,700	1,200	10,900
Total fruit trees	944,900	140,250	1,085,150
Table grapes (acres.)	50	----	50
Wine grapes (acres.)	6,700	2,600	9,300
Total acres grapes	6,750	2,600	9,350
Blackberries (acres.)	82	----	82
Gooseberries (acres.)	10	----	10
Raspberries (acres.)	8	----	8
Strawberries (acres.)	12	----	12
Total acres berries	112	----	112

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	1,600,000	$25,600
Blackberries	201,250	8,050
Corn	15,050 000	173,075
Cherries	400,000	22,000
Gooseberries	34,680	1,040
Grapes (tons)	14,400	395,200
Olives	3,200,000	72,000
Pears	644,648	------
Peaches	856,440	------
Plums	15,752	------
Irish potatoes	3,500 000	35,000
Prunes	14,067,828	------
Raspberries	------	320
Strawberries		360
Tomatoes	300,000	1,200

Dried—	Pounds.	Value.
Pears	16,000	------
Peaches	45,952	------
Plums	5,505	------
Prunes	5,275,439	------
Walnuts	106,700	$10,670

Wines, Brandies, Etc.

Number of wineries, 32; number of distilleries, 6; number of breweries, 2.

	Gallons.	Value.
Wines—Burgundy	75,100	$18,775
Claret	1,173,700	266,951
Hock	30,000	7,500
Riesling	735,600	166,188
Sauterne	15,050	3,662
Zinfandel	101,000	21,050
Totals	2,130,450	$484,126
Brandy	7,569	$3,784

Livestock Industry.

	Number.	Value.
Cattle—Beef	980	$29,400
Stock	7,200	129,600
Dairy Cows—Graded	9,100	273,000
Jersey	95	9,500
Calves	7,600	30,400
Swine	3,000	15,000
Horses—		
Thoroughbred	200	80,000
Standard-bred	1,200	12,000
Common	5,000	250,000
Colts	1,100	22,000
Mules	250	1,250
Sheep—Common	3,500	10,500
Lambs	1,500	1,500
Common Goats	1,800	3,600
Total stock all kinds	42,525	$867,750

Dairy Industry.

	No.	Production.	Value.
Creameries	10	------	------
Butter (pounds)	--	313,336	$82,115
Cream (gallons)	--	3,890	3,890

STATISTICS OF NAPA COUNTY, 1905-6—Continued.

Poultry and Eggs.

	Dozen.	Value.
Chickens	5,700	$29,640
Ducks	187	1,215
Geese	64	1,382
Turkeys	322	8,539
Eggs	237,862	56,492
Total value		$97,268

Forest Products.

	Amount.	Value.
Fuel (wood), cords	10,000	$55,000
Pickets (pieces)	------	950
Piles	2,000	10,000
Total value		$65,950

Power used used for mills and manufactories in county: Electrical—number, 13.

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value of Product.
Paper boxes	1	16	240,000	$14,400
Cement (tons)	1	250	159,720	2,096,500
Cigars		7	225,000	13,500
Foundries and iron works	1	4	------	6,000
Planing mills	1	25	------	70,000
Shoes	1	100	93,900	250,000
Artificial stone		14	------	22,974
Sandstone		6	------	7,500
Tanneries	2	122	------	680,000
Shirt factories	2	110	324,000	131,000
Ice cream companies	1	10	------	35,000
Gloves	1	275	------	400,000

Productions Shipped Out of State.

Brandy	7,569 gals.
Wine, sweet	2,790 gals.
Wine, table	1,436,360 gals.

NEVADA COUNTY.

Nevada County, with an area of over 1,000 square miles, begins at the Yuba County line and is hemmed in between the Middle Yuba and Bear rivers, until their sources are reached, when the boundary lines run directly east to the State of Nevada. It is bounded on the north by Yuba and Sierra counties, on the east by the State of Nevada and Placer County, on the south by Placer County, and on the west by Yuba County. It has a climate more varied than that of any other section of our State. From the rolling foothills of its western portion, where snow and frost are seldom seen, and where the elevation is but slightly above that of the sea-level; to the snow-capped peaks of the Sierra Nevadas, in the extreme east, where the elevation is nearly 8,000 feet.

It therefore naturally follows that with such a variety of climate, the industries of the different localities are many and diversified. In the extreme western part of the county, citrus fruits of a superb quality are grown, also the olive and many other fruits of this class; while in the central portion the Bartlett pear and other fruits of the temperate climate attain their best flavor.

Farming and stock-raising are also carried on to quite an extent. But we look for greater activity, in the immediate future, along the lines of agriculture and horticulture, from the fact that a broad-gauge railroad, connecting Nevada City and Grass Valley with Auburn and Marysville, now in course of construction, will pass through a portion of the county admirably adapted to these industries. Lack of transportation facilities has been the great drawback to fruit-raising in this county, but now that we are about to be brought into direct touch with the commercial world, we feel that a great impetus along these lines will naturally follow.

Nevada County's incomparable water system is also one of its many attributes destined to make her famous, and which is essential to the farmer, the fruit-grower, and the miner. Her network of ditches, canals, and waterways, aggregating fully one thousand miles in length, is conceded to be the greatest water-supply system in the State.

Nevada County has also two of the largest and best equipped electric power plants in the State, so that for power facilities it may be readily seen that this county is unexcelled.

But it is as a mining county that Nevada has gained a world-wide reputation. She stands preëminently the greatest gold-producing county in the State, and is accredited with having added to the circulating medium of the world fully $250,000,000. This is considered to be a very conservative estimate, for the reason that there are a number of companies, operating on a large scale, that have never given out a report of their product. With the suppression of hydraulic mining our annual output was diminished by nearly $4,000,000, but from our matchless quartz mines and from our drift mines (which, by the way,

are rapidly coming into prominence), our average annual yield of gold is at present, approximately, $2,250,000.

Considerable activity, within the past few years, has also developed along the line of copper mining. Capital looking for copper propositions has been attracted to Nevada County, and from the present outlook the county will certainly become one of the greatest copper-producing districts of California, if not of the world.

STATISTICS OF NEVADA COUNTY, 1905-6.

General Statistics.

Area, 1,016 square miles, or 650,240 acres.	
Number of farms	520
Number of acres assessed	489,819
Value of country real estate	$2,551,705
Of improvements thereon	$1,463,240
Of city and town lots	$407,875
Of improvements thereon	$1,284,730
Of personal property	$1,048,375
Total value of all property	$6,755,925
Expended on roads, last fiscal yr.	$28,925
Expended for bridges, last fiscal year	$7,580
Number of miles of public roads	650
Road levy per $100, 1906	50 cts.
Value of county buildings	$100,000
Mining and irrigating ditches—miles, 1,000; cost	$4,223,760
Railroads, steam—miles, 53.63; assessed value	$749,178
Railroads, electric, asses'd value	$47,200
Electric power plants, assessed value	$141,760
Electric power lines—miles, 61½; assessed value	$32,300
Number of acres irrigated	350

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Alfalfa hay	200	700	$11,750
Grain hay	5,000	5,000	90,000
Grass hay	150	450	4,750
Total hay	5,350	6,150	$106,500

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apples	13,120	1,270	14,390
Apricot	150	40	190
Cherry	282	64	346
Fig	280	50	330
Lemon	5	5	10
Nectarine	26	4	30
Olive	25	75	100
Orange	40	160	200
Peach	12,015	2,050	14,065
Pear	28,465	4,300	32,765
Plum	900	400	1,300
Prune	6,033	300	6,335
Quince	150	----	150
Persimmon	5	5	10
Pomegranate	12	3	15
Almond	60	350	410
Chestnut	12	9	21
Pecan	5	----	5
Walnut	105	900	1,005
Total fruit trees	61,692	9,985	71,677

Fruit Trees and Vines—Continued.

		Bearing.	Non-Bearing.	Total.
Table grapes	acres.	200	50	250
Wine grapes	acres.	400	200	600
Total acres grapes		600	250	850
Blackberries	acres.	12	5	17
Currants	acres.	1	----	1
Loganberries	acres.	1	1	2
Raspberries	acres.	6	2	8
Strawberries	acres.	6	----	6
Total acres berries		26	8	34

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	250,000	$6,200
Apricots	2,350	60
Blackberries	48,000	2,400
Beans	30,000	1,500
Beets	40,000	800
Cabbage	160,000	2,400
Celery	8,000	400
Corn	22,500	300
Currants	960	48
Cherries	1,500	120
Figs	10,716	315
Grapes	252,000	4,600
Loganberries	960	100
Nectarines	750	23
Onions	2,500	125
Oranges (boxes)	80	160
Olives	250	15
Pears	950,000	19,000
Peaches	122,785	3,070
Peas	17,500	700
Plums	54,000	945
Irish potatoes	300,000	3,750
Prunes	150,000	3,750
Quinces	4,500	90
Raspberries	5,760	280
Strawberries	5,500	330
Tomatoes	60,000	1,500
Total value		$53,039

Dried—	Pounds.	Value.
Prunes	60,000	$2,500
Walnuts	5 000	625
Totals	65,000	$3,125

Dairy Industry.

	No.	Production.	Value.
Creameries	2	----	----
Butter (pounds)		105,137	$28,387

STATISTICS OF NEVADA COUNTY, 1905-6—Continued.

Wines, Brandies, Etc.

Number of wineries, 2; number of breweries, 5.

	Gallons.	Value.
Wine—Claret	15,000	$9,000
Port	1,000	1,500
Total wine	16,000	$10,500
Beer (barrels)	4,000	$37,800
Vinegar	5,725	1,430

Livestock Industry.

	Number.	Value.
Cattle—Beef	450	$15,750
Stock	6,415	128,300
Dairy Cows—Graded	600	24,000
Jersey	75	4,500
Calves	1,825	18 250
Swine	500	3,500
Horses—		
Standard-bred	200	30,000
Common	1,800	180,000
Colts	150	7,500
Mules	45	4,500
Sheep—Common	5,000	15,000
Lambs	1,500	3,000
Angora Goats	150	500
Common Goats	200	400
Total stock all kinds	18,910	$435,200
Wool (pounds)	30,000	$10,500

Poultry and Eggs.

	Dozen.	Value.
Chickens	500	$2,500
Turkeys	40	600
Eggs	19,250	4,810
Total value		$7,910

Miscellaneous Products.

	Tons.	Value.
Natural ice	120,000	$300,000

Forest Products.

	Amount.	Value.
Area of lands, partly timbered (acres)	20,000	
Pine (acres)	20,000	$200,000
Sawmills (number)	6	
Fuel, wood (cords)	37,120	130,480
Laths	821,400	2,855
Lumber—		
Cedar, Pine, Fir (M ft.)	36,995	633,720
Pickets (pieces)	30,295	642
Posts (pieces)	5,495	1,189
Railroad ties (pieces)	15,000	7,500
Shakes (thousand)	1,000	11,000
Total value		$987,386

Power used for mills, mines and manufactories in county: Steam—number, 20; water—number, 40.

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value. of Product.
Wood boxes		--	7,760	$79,620
Cigars	5	15	936,000	44,460
Conf'ction'y (lbs.)	4	--	45,000	5,625
Foundries and iron works	3	45		100,000
Hides (pounds)			113,300	11,707
Lard (pounds)		--	57,500	6,109

Productions Shipped Out of State.

	Amount.
Peaches, fresh	1,500 boxes
Pears, fresh	12,000 boxes
Plums, fresh	400 boxes
Prunes, fresh	20,000 lbs.
Prunes, dried	30,000 lbs.
Grapes, fresh	50,000 lbs.

ORANGE COUNTY.

Orange County is one of the youngest counties, having been organized in 1889 from a portion of Los Angeles County. Its area is divided into mountains, 65; foothills, 150, and valleys, 550 square miles.

The Santa Ana range of mountains is the line between Orange and San Bernardino counties at the northeast corner of the former county. It is also the dividing line between Orange and San Diego counties on the east. This range also sends up a line of foothills westwardly along the seashore nearly halfway across the county. All of the western portion of the county is included in the Santa Ana plain, or valley. There are also several small valleys among the foothills and along the mountain streams. The Santa Ana plain is covered with a rich loam, and, with the exception of some patches of alkali, is very productive. The highest point of land is what is locally known as Saddleback, or Santa Ana Peak, with an elevation of 5,675 feet.

There is an abundant water supply. The Santa Ana River enters near the northeast corner, and traverses the entire Santa Ana plain, flowing into Newport Bay. Besides this stream there is Santiago Creek; also Aliso, Trabuco, Mission Vieja, San Juan, and Coyote creeks, and other streams. The last-named creek forms the boundary between Orange and Los Angeles counties on the west. The artesian belt running through Orange County furnishes a plentiful and cheap water supply, and makes the section as nearly independent of rainfall as it is possible to be. Much artesian water has been developed; more in the artesian belt west of the river than in any other portion. There hundreds of artesian wells have been sunk, and the farmers have installed pumping plants and organized irrigation districts.

In the foothills a sharp, gravelly loam of a reddish color prevails. Descending into the valleys, this loam loses its color and its sharpness and becomes black, with a large admixture of adobe and frequent streaks of alkali. West of the Santa Ana River large deposits of peat are found, the product of tule roots and other swamp vegetation. This varies in depth from a few inches to sixteen feet. This land is considered the best for agricultural purposes, and is held at a high figure.

All the fruits do well. Many varieties of oranges and several of lemons are grown. Oranges are shipped from the last of December until June, and the bulk in March and April.

There are some portions where apples are grown which vie with those of the Eastern States, in size, flavor, and appearance. It was only during the past few years that much fruit besides oranges and grapes was grown. Now, however, large orchards are annually being planted to almost every known variety.

Apricots, peaches, apples, oranges, lemons, figs, prunes, and walnuts do well, apricots especially holding front rank, with walnuts in the second place.

The larger amount of the fruit produced finds a market in the East, the citrus fruits and walnuts being shipped entirely out of the county. The deciduous fruits are very largely disposed of to the drying estab-

lishments and packing-houses, and by them shipped both dried and green to Eastern States.

The rich bottom lands yield immense crops of corn, and large portions grow the finest alfalfa and natural grasses.

The mesa, or uplands, are of the finest quality, and admirably adapted to barley, oats, wheat, flax, hemp, and the vine, as well as all the ordinary northern fruits.

Every character of soil that is found in California can be duplicated in these lands, and every product grown in the semi-tropics can be successfully raised.

Celery-raising has grown to a very large industry, the output reaching 1,800 carloads.

While celery-growing is occupying much attention, other sources of income are not neglected, and of these the most important are the dairy interests and the rearing of cattle and hogs.

The shipping of vegetables, consisting of early onions, potatoes, cauliflower, cabbage, etc., is a growing and profitable business.

The sugar-beet is raised extensively, and a factory is located at Los Alamitos. This factory runs four months, and consumes the product of over four thousand acres, turning out millions of pounds of sugar ready for table use. The big sugar factories at Chino and Oxnard draw extensively from the soil of this county, thousands of tons of beets being shipped to these places from the vicinity of Anaheim, Buena Park, Garden Grove, Westminster, and Bolsa every year.

No business has developed more rapidly than the oil industry. North and east of Fullerton thousands of dollars have been expended in sinking wells, several of which have turned out to be gushers.

Santa Ana is the county seat. Anaheim is next in size, Orange following. Tustin is a charming suburb of Santa Ana, with splendid orchards, attractive homes and people of refinement. Fullerton is a place of much business and the headquarters of the oil industry of that section. El Toro is made up in a large measure of English settlers of wealth and progressive ideas. San Juan Capistrano, in the extreme south, is the seat of one of the largest and most interesting old missions.

STATISTICS OF ORANGE COUNTY, 1905-6.

General Statistics.

Number of farms	4,319
Number of acres assessed	443,456
Value of country real estate	$7,088,115
Of improvements thereon	$1,505,955
Of city and town lots	$2,904,680
Of improvements thereon	$2,036,225
Of personal property	$1,680,310
Total value of all property	$15,215,285
Expended on roads, last fiscal yr.	$38,522
Expended for bridges, last fiscal year	$1,000
Number of miles of public roads	365
Road levy per $100, 1906	40 cts.
Value of county buildings	$121,000
Railroads, 3; steam—miles, 98.95; assessed value	$160,855
Railroads, electric—miles, 31.83; assessed value	$216,735
Electric power plants—1; assessed value	$47,735
Number of acres irrigated	32,000
Pumping plants used for irrigation, 227; value	$43,595

Wines, Brandies, Etc.

Number of wineries, 5; number of breweries, 1.

	Gallons.	Value
Wine—Angelica	20,000	$10,000
Claret	70,000	17,500
Port	28,000	14,000
Riesling	12,000	3,000
Sherry	7,000	3,500
Totals	137,000	$48,000
Beer (barrels)	6,000	.....
Brandy	2,000	$3,500

Poultry and Eggs.

	Dozen.	Value.
Chickens	18,000	$90,000
Ducks	200	1,000
Geese	100	2,000
Turkeys	250	5,000
Eggs	2,700,000	675,000
Total value		$773,000

STATISTICS OF ORANGE COUNTY, 1905-6—Continued.

Number of Fruit Trees and Vines.

	Bearing.	Non Bearing.	Total.
Apple	11,050	3,840	14,890
Apricot	144,780	57,980	200,760
Fig	2,510	------	2,510
Lemon	49,875	63,235	113,110
Olive	22,935	------	22,935
Orange	590,425	192,280	782,705
Peach	23,580	25,970	49,550
Pear	4,070	1,740	5,810
Prune	20,220	------	20,220
Walnut	160,185	102,550	262,735
Total trees	1,029,830	447,595	1,475,225
Raisin grapes (acres.)	300	------	300
Wine grapes (acres.)	750	------	750
Total grapes	1,050	------	1,050
Blackberries (acres.)	40	------	40
Loganberries (acres.)	15	------	15
Raspberries (acres.)	5	------	5
Strawberries (acres.)	100	------	100
Total berries	160	------	160

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	552,500	$1,050
Blackberries	160,000	8,000
Cabbage (tons)	6,000	90,000
Lemons (boxes)	31,200	39,000
Loganberries	60,000	3,000
Oranges (boxes)	618,884	773,605
Peaches	1,179,000	23,580
Persimmons (boxes)	500	------
Irish potatoes (sacks)	100,000	125,000
Sweet potatoes	20,000	40,000
Raspberries	20,000	1,000
Strawberries	400,000	20,000
Tomatoes	450,000	4,500
Total value		$1,128,735

Dried—	Pounds.	Value.
Apricots	754,000	$98,020
Walnuts	5,236,680	575,035
Totals	5,990,680	$673,055

Canned—	Cases.	Value.
Pears	241	$482
Peaches	2,944	5,888
Tomatoes	25,500	1,875
Tomatoes (gals.)	2,000	------
Peaches (gals.)	2,000	------
Taylor cannery, Santa Ana, different varieties of fruit—		
Tins	8,420	------
Glass	1,683	------
Total cases	51,788	------

Fish Industry.

	Pounds.	Value.
Various kinds	815,950	$24,478

Cereal Products and Hay.

	Acres.	Tons of 2,000 pounds. Tons.	Value.
Wheat	1,560	830	$20,750
Barley	42,420	22,600	452,000
Oats	1,000	220	5,500
Rye	12,000	2,000	79,040
Corn	2,200	1,000	25,000
Total cereals	59,180	26,650	$582,290
Alfalfa hay	3,000	------	$120,000
Grain hay	33,000	------	330,000
Total hay	36,000	------	$450,000

Livestock Industry.

	Number.	Value.
Cattle—Beef	90	$1,350
Stock	5,725	57,250
Dairy Cows—Graded	1,700	34,000
Thoroughbred—different breeds	3,845	67,285
Calves	2,670	13,350
Swine	2,260	6,780
Horses—		
Thoroughbred	35	7,000
Standard-bred	1,345	53,800
Common	2,680	67,000
Colts	1,590	19,875
Mules	510	20,400
Sheep—Common	28,200	56,400
Lambs	7,100	3,550
Total stock all kinds	57,750	$408,040

Dairy Industry.

	No.	Production.	Value.
Creameries	2	------	------
Skimming stations	5	------	------
Butter (pounds)		175,000	$43,750
Cheese (pounds)		4,663,600	93,272
Condensed milk (cases)		350,000	306,250
Cream (gallons)		4,218,235	421,823
Total value			$825,095

Miscellaneous Products.

	Pounds.	Value.
Bees (hives) No., 2,750	------	$5,500
Beeswax	4,000	1,000
Chile peppers, dried (tons)	350	70,000
Flax (700 acres)	940,000	11,750
Flowers and plants (acres)	10	------
Honey (tons, 193)	386,000	19,300
Honey, comb	10,000	1,000
Pumpkins (tons)	1,200	3,000
Green peas and beans (400 acres)	1,600,000	64,000
Sugar beets (tons)	34,194	160,970
Celery (3,410 acres), (carloads)	2,276	470,000
Peanuts (300 acres)	400,000	16,000
Beet sugar	11,750,000	528,750
Crude oil (bbls.)	1,407,225	422,167
Wood (cords)	4,000	20,000
Apricot pits (tons)	85	2,550

STATISTICS OF ORANGE COUNTY, 1905-6—Continued.

Manufactories.

	No.	No of Employés.	Quantity Produced.	Value of Product.
Bookbinderies	1	....	.....	.....
Brick	.....	....	125,000	$1,000
Confect'ry (lbs.)	3	....	.....	.....
Flouring mills (bbls. daily)	1	....	100	.....
Ice plant	.....	.....	2,000	1,000
Planing mills	4	65	.....	.....
Artificial stone	6	36	.....	.....
Peat fuel	1	8	.....	.....
Tiling and sewer pipe	2	15	.....	15,000

Productions Shipped Out of State.

Apricots, dried	754,000 lbs.
Lemons (100 carloads)	31,200 boxes

Productions Shipped Out of State—Cont'd.

Persimmons	500 boxes
Oranges (1,682 carloads)	618,884 boxes
Walnuts	5,091,080 lbs.
Beeswax	7,000 lbs.
Cabbage	300 carloads
Celery	2,276 carloads
Milk	777,600 lbs.
Cream	3,705,785 lbs.
Peas, green	1,500,000 lbs.
Irish potatoes	15,000 sacks
Sweet potatoes	16,000 sacks
Barley	59 carloads
Tomatoes, fresh	10 carloads
Fruit, canned, different kinds	10,103 cases
Sugar beets	1,015 carloads
Apricot pits	85 tons
Crude oil	792,353 barrels

PLACER COUNTY.

Placer County lies between latitude 38° 70′ and 39° 30′. Its direction is northeast and southwest. It is about 100 miles long and of varying widths, from 10 to 30 miles, the course and distance being defined by the course of the rivers which mark its boundaries. It extends from about 8 miles from the Sacramento River to the summit of the Sierra Nevada Mountains. Just above Auburn, between the Bear and American rivers, the county is very narrow, being but about 8 miles across. Above Auburn it widens out into the two divides lying between the Bear River and the Middle Fork of the American River. These are known as the Dutch Flat or Railroad Divide, and the Forest Hill Divide. The southwestern portion is more regular in shape than the part just described. This section contains the foothill and level agricultural lands. Its shape is nearly a parallelogram, the southwest two thirds being on the plains proper, and the northeast one third being the foothill and fruit district.

Of the area, 810 square miles are mountainous, 450 foothills, and the remainder valleys. The entire extent faces toward the west, extending from an altitude of some 40 feet on the plains in the western portion to over 7,000 feet at its eastern boundary line, embracing nearly every variety of climate known in the State. At the eastern boundary, separating it from the State of Nevada, is Lake Tahoe, one of the most picturesque lakes in America. The topography of Placer County is as irregular as is its shape. Imagine the whole Atlantic coast from Labrador to Tallahassee incorporated into one county, and one will have a fair idea of what may be found in Placer, exaggerated as to size, but not as to the great variety of climate, elevations, soils, and resources. As to the latter, the whole Atlantic seaboard can hardly equal the endless variety to be found within the borders of this county, which rivals Florida in the quality of its oranges, excels New Jersey in peaches, equals the New England States in its granite quarries, and compares favorably with Maine in the quality of its lumber.

From an elevation of about 2,500 feet up to the summit of the mountains snow falls in the winter, light at the lower edge of the line, and increasing in depth as it ascends the Sierras. Here is a strip of territory from the snow line up to an elevation of 3,000 feet, particularly well adapted to the apple, the pear, and a great variety of vegetables.

The soil of the western or valley portion is of the same general alluvial composition as all the soil in the Sacramento Valley, and is well adapted to the growth of grain. Over 30,000 acres are annually devoted to wheat, barley, oats, and hay. The low foothills back of Lincoln are excellent for the grape.

The soil of the valley lands is mostly a red loam, mixed with considerable clay in spots; that of the foothills is a gravelly red loam, in places light and sandy, and is excellent for the production of fruits. Farther up the soil changes to a red character, with a slate bedrock. This, too, is very fertile. The agricultural region includes the valley

and foothill lands all the way from the western boundary to an elevation above Colfax. The foothills everywhere possess a soil which only needs cultivation. The granite soils around Newcastle are composed largely of clay, sand, soda, potash, lime, phosphorus, iron, and magnesia. The constant decomposition that is going on appears to be of nearly endless duration, and of such a nature as to render the soil almost inexhaustible. Artificial fertilization has not yet been found necessary.

For an irrigation water supply Placer has three sources—the Yuba, Bear, and American rivers. Including its branches, the Bear River irrigation ditch is 200 miles in length. This system has been increased in its capacity, and brings water from the Yuba River, so that an abundance is assured. There are several other canals, originally built for mining but now used for irrigation.

Placer County holds a foremost position among the fruit-producers, and it is the most easterly of the counties of California. With the Central Pacific Railroad running the entire length of her territory, she is one day nearer the Eastern market than any other part of the State, a very large item in the shipping of green fruit. In her thermal belt fruit ripens earlier than in most other places in the State, another large advantage. Pears, plums, prunes, apples, apricots, cherries, persimmons, pomegranates, quinces, and figs all do well. Peaches have been grown for the past twenty-five years, and failure of a crop is unknown. Fine oranges are produced, and Placer holds a position beside Butte in the northern citrus belt. In the production of small fruits, berries, and table grapes Placer holds a foremost place.

The largest cherry trees in the world are at the ranch of Robert Hector, from one of which has been picked as high as 3,000 pounds in one season. At the Pan-American Exposition Placer won gold medals for peaches, oranges, and grapes. An exhibit of fifty oranges averaged twenty-four ounces in weight.

A lemon that was on exhibition at the Sacramento Chamber of Commerce measured 22 inches in circumference the small way, and weighed three and a half pounds.

Olive-growing is a profitable industry. The principal orchards are provided with manufacturing plants and are producing a very fine quality of oil.

Dairying and stock and poultry raising are extensive industries. Butter-making is carried on in the summer, the mountain ranges providing plenty of natural feed; the butter is of a very fine quality.

Considerable quantities of vegetables are raised, not only for local consumption, but also for shipment abroad.

Much sugar and yellow pine, fir, spruce, and cedar are found in the mountains, and the lumber output from that section has been very large for many years. Oak and scrub pine abound all over the foothills, and fuel is plentiful.

Placer County ranks well up among the mining counties. Her average yearly contribution to the world's wealth is something above the million mark. The total production since the discovery of gold at Auburn, May 16, 1848, is estimated at much over $75,000,000. The mining methods include drift, river, placer, and quartz. Placer's drift mines are among the largest in the world.

The granite quarries rank with the best in the United States. Nearly all the street curbing in San Francisco is from the Placer quarries,

while the State Capitol is an example of the value and beauty of foothill granite.

Potter's clay is found in abundance at Lincoln, from which is manufactured sewer pipe, tiling, pressed brick, architectural terra cotta, and glazed brick for interior decoration.

Placer County is a natural sanatorium. As a resort for patients suffering from pulmonary diseases, leading physicians say it has no equal on the Pacific Coast. It is here patients find relief and some of them are cured. The altitude is just right for people suffering from asthma or bronchial diseases.

STATISTICS OF PLACER COUNTY, 1905-6.

General Statistics.

Area, 1,390 square miles, or 889,600 acres.	
Number of farms	927
Number of acres assessed	645,790
Value of country real estate	$3,926,340
Of improvements thereon	$1,206,550
Of city and town lots	$423,270
Of improvements thereon	$934,890
Of personal property	$749,070
Total value of all property	$7,411,715
Expended on roads, last fiscal yr.	$37,400
Expended for bridges, last fiscal year	$7,500
Number of miles of public roads	724
Road levy per $100, 1906	40 cts.
Value of county buildings	$260,000
Irrigating ditches—miles, 127; cost	$135,615
Railroads, steam—miles, 131.47; assessed value	$9,331,880
Electric power plants—3; assessed value	$35,400
Electric power lines—miles, 75½; assessed value	$35,500
Number of acres irrigated	12,400

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	21,300	6.800	$182,760
Barley	11,100	2.300	43,275
Oats	3,900	793	18,450
Total cereals	36,300	9,893	$244,485
Grain hay	31,200	41,200	$289,400

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	22,470	5,700	28,170
Apricot	13,300	9,000	22,300
Cherry	19,100	9,600	28,700
Fig	7,400	3.250	10,650
Lemon	870	600	1,470
Nectarine	9,800	2,800	12,600
Olive	39,700	16,400	56,100
Orange	32,000	19,200	51,200
Peach	909,200	604,710	1,513,910
Pear	116,600	56,000	172,600
Plum	115,400	182,500	297,900
Prune	6,000	2,000	8,000
Quince	1,800	200	2,000
Almond	7,400	4,600	12,000
Other nuts	1,090	500	1,590
Total trees	1,302,130	917,060	2,219,190

Fruit Trees and Vines—Continued.

		Bearing.	Non-Bearing	Total.
Raisin grapes	acres.	210	------	210
Table grapes	acres.	2,100	480	2.580
Wine grapes	acres.	1,740	1,000	2,740
Total grapes		4,050	1,480	5,530

Fruit, Vegetables, Etc.

Green—	Total Production. Pounds.	Value.
Apples	220,400	$3,400
Apricots	516,000	10,200
Blackberries	18,000	6,460
Currants	3,400	195
Cherries	495,700	49,500
Figs	10,400	740
Grapes	6,150,400	151,100
Nectarines	29,000	1,075
Oranges (boxes)	49,500	50,200
Olives	382,000	------
Pears	3,190,500	37,400
Peaches	21,419,000	429,100
Persimmons	9.000	475
Plums	7,490,500	299,620
Quinces	40,000	550
Raspberries	119,400	4,970
Strawberries	400,000	15,970
Tomatoes	370,000	3,650
Total value		$1,066,445

Canned—	Cases.	Value.
Apples	150	$300
Blackberries	125	250
Pears	2,983	5.900
Peaches	5,627	11,400
Tomatoes	1,940	3,880
Totals	10,825	$21,730

Wines, Brandies, Etc.

Number of wineries, 2; number of distilleries, 1; number of breweries, 2.

	Gallons	Value.
Wine—Angelica	37,400	$10,100
Claret	59,470	18,900
Port	58,900	25,900
Sherry	24,000	9,700
Totals	179,770	$64,600
Beer (barrels)	22.500	$7,400
Brandy	9,800	5,995
Vinegar	4,800	570

STATISTICS OF PLACER COUNTY, 1905-6—Continued.

Livestock Industry.

	Number.	Value.
Cattle—Beef	1,940	$41,300
Stock	1,540	21,750
Dairy Cows—Graded	2,525	65,825
Jersey	470	3,000
Calves	1,260	7,650
Swine	740	2,400
Horses—		
Thoroughbred	6	2,400
Standard-bred	6	1,440
Common	1,693	54,000
Colts	460	7,470
Mules	275	8,250
Sheep—		
Imported or fine	500	2,500
Common	21,000	57,000
Lambs	1,800	2,700
Common Goats	960	1,025
Total stock all kinds	35,175	$278,710
Wool (pounds)	172,600	$39,570

Forest Products.

	Amount.	Value.
Area of timber lands—		
Cedar (acres)	3,900	------
Pine (acres)	8,000	------
Sawmills (number)	3	$38,950
Laths	748,000	------
Lumber—Cedar (feet)	43,000	750
Pine (feet)	6,829,750	127,518
Posts (pieces)	190,000	15,200
Railroad ties (pieces)	27,000	10,400
Sash and door factories (number)	1	------
Total value		$192,818

Power used for mills and manufactories in county: steam—number, 3.

Dairy Industry.

	No.	Production.	Value.
Creameries	4	74,200	$18,700
Butter (pounds)		4,900	1,540
Cream (gallons)		3,400	2,475

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value of Product.
Brick (thousand)	--	--	1,100	$46,000
Cigars	2	10	426,000	17,900
Confect'nery (lbs.)	1	4	7,000	1,500
Olive oil (gallons)	--	--	2,760	3,900
P'kl'd olives (gals.)	--	--	2,400	875
Sewer pipe (feet)	--	7	4,000	275,400
Planing mills	2	--	------	------
Potteries	1	--	----	------
Granite (cars)	--	--	260	-----
Tiling (feet)	--	--	175,000	5,000

Productions Shipped Out of State.

	Amount.
Apples, fresh	7,000 boxes
Apricots, fresh	10,400 boxes
Blackberries, fresh	12,400 cases
Cherries, fresh	4,900 boxes
Figs, fresh	8,700 lbs.
Grapes, fresh	3,748,000 lbs.
Nectarines, fresh	1,475 boxes
Oranges	47,400 boxes
Peaches, fresh	1,128,475 boxes
Pears, fresh	92,600 boxes
Plums, fresh	443,700 boxes
Quinces	120,000 lbs.
Raspberries, fresh	124,000 lbs.
Strawberries, fresh	486,400 lbs.
Tomatoes, fresh	17,200 boxes
Tomatoes, canned	1,790 cases
Wool	172,600 lbs.
Lumber	4,000 M. ft

RIVERSIDE COUNTY.

Riverside is one of the youngest counties, having been formed in 1893, from the southwestern part of San Bernardino and the northern part of San Diego.

The progress of the county is practically confined to its northwest corner, embracing the largest orange-growing district in the world. The rest is largely an undeveloped desert region, believed to be a storehouse of useful minerals and metals.

The county recently has had exceptional progress and prosperity, and a considerable area of new land has been brought under cultivation. Many new orchards, both citrus and deciduous, have been set out.

Alfalfa has also been planted on a large scale.

The orange crop in the county is the largest in the State. The growing of citrus fruits is the main industry, although deciduous fruits of most kinds do well, particularly apricots and prunes. The olive thrives, and a very fine grade of oil is produced. Melons and cantaloupes are extensively grown and mature early.

Diversified farming is quite a feature in several sections. Alfalfa grows luxuriantly; broomcorn does well, and is a very prominent and profitable crop. The sugar-beet thrives, and considerable new land has recently been put under cultivation.

Dairying is profitable, and modern creameries with the latest appliances are located in different sections. The stock used for dairying purposes is of a very high grade, mostly pure-bred representatives of the milk strains.

Considerable stock and hogs are fattened for market, and poultry-raising receives considerable attention.

Bee-keeping is another growing industry, and a fine grade of honey is produced.

In 1901 the city of Riverside completed a $40,000 steam-power plant, to generate electricity for power and lighting purposes The sewer system has been extended and the streets extensively improved.

The Riverside Water Company is the chief of the companies that supply Riverside with its fine water system, that has a continuous and ample flow.

The rapid development of Strawberry Valley as a health resort has done much to stimulate local trade.

The importance of Perris has been increased by the rapid development of water, and the consequent large acreage of new land put under cultivation. Thousands of acres in this vicinity have been planted to alfalfa.

Hemet has a large flouring-mill, fruit-drying plant, and broom factory in successful operation. The shipments of olives are large. Fine raisins are produced in this section, and the grain industry is flourishing.

At Elsinore coal mines are successfully operated, and a superior quality of potter's clay is obtained in the vicinity. The domestic water-system is owned by the city. Fine apricots, prunes, olives, and other fruits are raised. Seven miles distant is the Good Hope gold mine, with a stamp mill and cyanide plant. During the open season Lake Elsinore abounds with wild ducks of various kinds, making it an attractive place for sportsmen.

A modern and progressive colony has been established at Ethance, possessing what is undoubtedly the most perfect and complete private irrigation system in the State. The colony has an electric plant of the most modern type, which is utilized to generate power for pumping and lighting purposes. Broomcorn, sugar-beets, and alfalfa produce profitable crops.

Indio is a little health resort that lies below sea-level. A number of artesian wells have been developed, and much land in the vicinity has been placed under cultivation. Watermelons and cantaloupes are extensively grown.

STATISTICS OF RIVERSIDE COUNTY, 1905-6.

General Statistics.

Area, 7,000 square miles, or 4,480,000 acres.	
Number of acres assessed	933,210
Value of country real estate	$6,014,842
Of improvements thereon	$3,095,320
Of city and town lots	$1,414,809
Of improvements thereon	$2,256,210
Of personal property	$1,728,610
Total value of all property	$14,509,791
Expended on roads, last fiscal yr.	$56,639
Expended for bridges, last fiscal year	$16,273
Number of miles of public roads	1,282
Road levy per $100, 1906	40 cts.
Value of county buildings	$244,000
Irrigating ditches—miles, 124.88; cost	$975,625
Railroads, steam—miles, 207; assessed value	$2,523,270
Railroads, electric—miles, 10; assessed value	$15,000
Electric power plants—3; assessed value	$12,100
Electric power lines—3; miles	18

One municipal electric light plant, valued at $125,000, in city of Riverside, not assessed.

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	1,000	500	1,500
Apricot	24,000	400	24,400
Cherry	4,000	------	4,000
Fig	150	------	150
Lemon	177,700	------	177,700
Olive	67,866	------	67,866
Orange	3,048,600	69,500	3,118,100
Peach	18,000	------	18,000
Pear	6,000	1,200	7,200
Plum	1,200	100	1,300
Prune	24,000	1,500	25,500
Quince	150	------	150
Almond	15,000	5,000	20,000
Walnut	2,460	------	2,460
Total fruit trees	3,360,126	78,200	3,438,326

Fruit Trees and Vines—Continued.

		Bearing.	Non-Bearing.	Total.
Raisin grapes	acres.	160	------	160
Table grapes	acres.	515	------	515
Wine grapes	acres.	5,185	------	5,185
Total acres grapes		5,860	------	5,860

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	1,363,200	$13,698
Apricots	1,816,200	18,224
Blackberries	160,000	5,200
Beans	120,960	3,014
Cabbage	126,000	3,780
Cherries	20,000	800
Figs	4,500	2,250
Lemons (boxes)	350,080	592,956
Onions	6,000	120
Oranges (boxes)	1,861,780	2,367,885
Olives	1,584,000	24,900
Pears	260	6
Peaches	1,801,000	18,020
Plums	120,000	1,200
Irish potatoes	93,600	1,872
Sweet potatoes	1,400	350
Prunes	1,800,000	18,000
Quinces	9,000	90
Raspberries	58,330	2,332
Strawberries	387,500	19,375
Tomatoes	750,000	11,250
Totals	12,433,810	$3,105,322

Dried—	Pounds.	Value.
Almonds	850	$128
Apricots	77,235	10,040
Onions	1,680	25
Pears	550,000	44,000
Peaches	108,750	10,913
Prunes	30,000	1,030
Raisins	3,500	210
Walnuts	6,000	660

STATISTICS OF RIVERSIDE COUNTY, 1905-6—Continued.

Fruit, Vegetables, Etc.—Continued.

Canned—	Cases.	Value.
Apricots	7,984	$798
Peaches	14,797	1,479
Totals	22,781	$2,277

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	51,891	31,919	$845,024
Barley	114,158	62,095	1,196,900
Oats	1,730	907	14,899
Corn	20	59	1,770
Total cereals	167,799	94,980	$2,058,593
Alfalfa hay	9,112	42,306	$308,265
Grain hay	61,728	68,541	679,100
Total hay	70,830	110,847	$987,365

Wines, Brandies, Etc.

Number of wineries, 5.

	Gallons.	Value.
Wine—Angelica	67,000	$43,050
Claret	450,000	45,000
Muscatel	39,000	25,350
Port	180,430	113,642
Sherry	285,000	185,250
Totals	1,021,430	$412,292

Livestock Industry.

	Number.	Value.
Cattle—Beef	1,201	$43,745
Stock	8,193	167,250
Dairy Cows—Graded	1,501	63,110
Holsteins	252	8,820
Jersey	932	34,720
Polled Angus	100	3,500
Mixed breeds	1,314	26,480
Shorthorns	80	3,550
Calves	2,729	9,536
Swine	5,373	35,349
Horses—		
Thoroughbred	3	9,000
Standard-bred	1,006	100,600
Common	6,260	150,597
Colts	1,289	33,577
Mules	1,104	149,436
Sheep—Common	30,122	88,914
Lambs	2,800	3,000
Angora Goats	95	376
Common Goats	174	536
Total stock all kinds	64,528	$832,096
Wool (pounds)	151,600	$17,040

Dairy Industry.

	No.	Production.	Value.
Creameries	4	------	------
Skimming stations	7	------	------
Butter (pounds)		127,360	33,631
Condensed milk (cases)		7,300	21,900
Cream (gallons)		25,000	63,184
Total value			$118,715

Poultry and Eggs.

	Dozen.	Value.
Chickens	7,817	$41,385
Ducks	312	988
Geese	58	317
Turkeys	2,915	70,000
Eggs	2,182,688	97,192
Total value		$209,882

Miscellaneous Products.

	Pounds.	Value.
Bees (hives)—number, 20,631	------	$57,222
Beeswax	8,005	2,294
Honey	582,815	31,435
Hops	87,000	10,440
Total value		$101,391

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value of Product.
Bookbinderies	1	6	------	$20,000
Brick (thousand)	4	125	6,100	89,100
Cigars (thousand)	1	6	225	7,825
Flouring mills (barrels)	1	2	3,600	18,000
Lime (barrels)	1	----	2,500	------
Hides (pounds)		----	11,375	2,275
Olive oil (gallons)	3	----	1,210,823	16,235
Pickled olives (gallons)		----	3,780	2,825
Sewer pipe	2	30	------	121,250
Planing mills	2	49	------	780,000
Potteries	2	100	------	200,000
Artificial stone (tons)	2	12	3,000	30,000
Marble	1	4	------	2,400
Tiling (tons)	1	----	30	600

Productions Shipped Out of State.

	Amount.
Lemons	349,656 boxes
Oranges	1,854,984 boxes
Honey	155,500 lbs.
Wine—Table	299,000 gals.
Olive oil	2,280 gals.
Olives, pickled	1,505 gals.

SACRAMENTO COUNTY.

Sacramento County is among the largest in the Sacramento Valley. It was organized by the first Legislature; within its confines is the seat of State government; the annual fairs of the State Agricultural Society are held in and near Sacramento City.

Its cities and towns are: Sacramento, Folsom, Galt, Elk Grove, Florin, Oak Park, Walnut Grove, Isleton, Franklin, Cosumnes.

The area is almost all a rich alluvial plain from 30 to 75 feet above sea level, gradually rising from the rivers to meet the low rolling foothills of the Sierra Nevada Mountains; these foothills commence at the extreme eastern part, and are from 6 to 8 miles wide. There are no mountains and aside from this foothill belt the surface has only gentle undulations.

The Sacramento River traverses the western boundary tortuously for about 90 miles across the rich bottoms, cutting them up at the lower part into numerous small and several large islands. The Sacramento is the longest and largest river in the State, and is navigable from Red Bluff to San Francisco Bay.

The American River rises in the upper Sierras, and enters the county at the northeast corner, among the low foothills. It flows in a southwest direction through the entire width, a distance of some 35 miles, and empties into the Sacramento just north of Sacramento City.

Geological indications prove that in remote ages the entire Sacramento Valley and a section of the foothills to an altitude of several hundred feet were portions of the bed of a vast island sea or lake, and that into this lake the washings of the surrounding mountains were poured to form the present soils, which are made up of all the fertile mineral and vegetable elements in almost inexhaustible quantities. Many analyses have been made of these soils from the alluvial valleys, the upper lands, and the foothills; these analyses have demonstrated that the soils of this valley are unexcelled for fertility.

In addition to the numerous rivers and streams there is, underlying the entire area of the county, an inexhaustible supply of pure and excellent water for domestic and irrigating purposes. Throughout the greater portion this subterranean supply is easily appropriated by means of a light lifting power.

The first venture in agriculture in the Sacramento Valley was by General John A. Sutter in 1839. He received a concession of a large tract of land from the Mexican Government, and located his fort near the junction of the American with the Sacramento River. His first wheat field was a portion of the land now covered by Sacramento City. He planted the first grapevines and fruit trees, and practically demonstrated the unsurpassed fertility of the soil of the great valley in the north.

Thousands of acres along the river bottoms and on the islands are used for the production of all kinds of vegetables, which are shipped East by the carload and at times by the trainload. A great deal of this product is disposed of to the canneries in this and other counties.

Alfalfa grows luxuriantly without irrigation on all the rich bottom lands, producing from four to eight tons to the acre.

Fruits of all kinds are produced on any of the lands of the county, and particularly on the river bottoms and the islands.

The winter fruits are oranges, lemons, pomegranates, olives, and persimmons, which all ripen in November, December, and January. The Japanese persimmons grow to the size of apples. Olives are very profitable, both for pickling and for oil.

The spring fruits that mature and are marketed in April, May, and June embrace strawberries, raspberries, blackberries, and cherries.

At Florin, on the western division of the Southern Pacific Railroad, 9⅛ miles south of Sacramento City, is the most productive strawberry belt in the State. Its product has a reputation for excellence all over the Western States. Tokay grapes from this district are shipped to Eastern markets through the local associations.

Apricots ripen early, and of all countries in the world California is the only one that has made a thorough success of that fruit, and in this county it reaches its very finest development in size, flavor and productiveness.

A large number of varieties of pears are grown, chief among them the renowned Bartlett.

Plums are very profitable. They grow to large size, and are shipped in vast quantities to the Eastern and home markets.

Nectarines do well, and are cultivated to a considerable extent.

In the fall the fruit products are apples, pears, grapes, quinces, prunes, and peaches.

Sacramento County is preëminently the home of the grape, and on the red lands of the plains it reaches its highest perfection, particularly with irrigation. The table varieties include the Tokay, Muscat, Black Prince, Morocco, Emperor, and Cornichon. They always bring first-class prices for shipment to the Eastern markets. The wineries of the State handle quantities of some of these varieties.

French, or petite, prunes are a leading fruit. They are remarkably prolific, and when cured excel the imported article, and bring a much higher price in the markets of the world.

Figs grow in any part of the county, but on the river bottoms they reach great size and are remarkably prolific. The Smyrna, or "fig of commerce," has been introduced and successfully grown.

Raisins are easily cured, the climate being peculiarly favorable.

Almonds have long been found a reliable and profitable crop. They can be grown in any part of the county.

The English soft-shell walnut has been demonstrated to be a profitable crop. Black walnut trees are extensively grown for shade and ornament.

Broomcorn is grown, as is also Egyptian corn—the latter making an excellent and cheap food for stock.

Hundreds of tons of beans of all kinds are produced on the river and island lands. The interior of Grand and Tyler islands is to a great degree devoted to their production.

Potatoes, both sweet and Irish, are grown in large quantities on the

bottom lands; of the latter, the average yield per acre is from 100 to 150 sacks.

Sacramento City, by reason of natural advantages, geographical relation to various producing sections, and admirable transportation facilities, deservedly bears the reputation of being the largest fruit and vegetable shipping point in the State. It is the recognized outlet for the products of the Sacramento Valley.

The dry atmosphere is specially suited for the drying of fruits, and the article so produced is regarded as first class in the markets of the world.

The California Fruit Canners' Association possesses at Sacramento one of the largest and most modern fruit and vegetable canneries in the world. This cannery is in operation during more months each year than any other in the State, beginning on asparagus the latter part of March, and running steadily for the succeeding eight months, ending the latter part of November on tomatoes and beans.

Sacramento County presents great opportunities to the livestock breeder and the dairyman. The climate is so even, temperate, and mild that animals remain in the open air, practically unsheltered, the year round without hardship. The soil, because of its richness, is peculiarly adapted to the growth of forage crops, especially alfalfa, which is at the same time one of the best and the cheapest of stock feeds. There are quite a number of creameries. The average character of the dairy stock is fair, and is being constantly improved by the introduction of well-bred animals.

Hogs are raised generally by the farmers, and several breed pedigreed Poland-China, Berkshire, and Essex swine quite extensively. The breeding of pedigreed hogs has been very profitable.

The poultry business has steadily increased in importance in the last few years. Elk Grove, 15 miles south of Sacramento City, on the line of the railroad, and but 5 miles east of the Sacramento River, is the principal poultry district.

Near Sacramento City the raising of poultry is made a specialty by many, and with profit.

Along the Sacramento, American, and Cosumnes rivers are the most productive hop fields in the United States. Hop culture on this coast dates back to 1858. It was early demonstrated that the soil and climate of Sacramento County was unsurpassed for hop culture, and that it is the only place known where a crop of from 1,000 to 2,000 pounds per acre can be grown the first year the roots are planted. It is a common occurrence to grow 2,000 or 3,000 pounds on an acre of ground, and in some instances 4,000 pounds.

There are quite a number of wineries in the county. The output is shipped all over the world, and is principally disposed of in the United States, Central America and the Islands. The port is not heavy in body nor dark in color, but is rather more delicate and lighter, having great character, and resembling closely the light, high-grade ports of Portugal. The county has a great reputation for fine sherry.

Few counties contain a greater mileage of railroads than does Sacramento. From the capital city the Central Pacific leads eastward across the continent; the California & Oregon passes to the north into Oregon, and from thence to Washington, and also to the Eastern States. At Galt a branch line runs up into the county of Amador;

the California Pacific runs on the west of the Sacramento River to Oakland; and the Sacramento & Placerville passes along the American River through Folsom, and thence into the county of El Dorado. From most all of these roads branches extend into the various counties of the Sacramento Valley. The Western Pacific, a new transcontinental line, now being constructed, will run through Sacramento from north to south. From its geographical position, Sacramento City is the natural railroad center of the central and northern portions of the State.

The Southern Pacific Company operates two steamboats that make daily trips between Sacramento and San Francisco, touching at the various towns and farm landings to receive and discharge freight. The Sacramento Transportation Company operates eight steamboats and twenty-five barges that are run between Red Bluff and San Francisco. They touch at all landings, and move a great part of the grain that is produced in the up-river counties, as well as all other kinds of freight. The Farmers' Transportation Company is controlled by an association of farmers. Its steamboats run between Colusa and San Francisco, making weekly trips.

Sacramento City, being the center and metropolis of a rich portion of the State, the heart of a vast railroad system, the point from which steamers pass to the north and to the south, and with unlimited water and electrical power at her very doors, presents advantages in manufactures excelled by no other city on the coast. Here are located the extensive shops of the Southern Pacific Company. For years the great power of the swift-flowing American was allowed to go to waste, but in 1888, at the Folsom State Prison, 22 miles from Sacramento City and in the county, a mighty granite dam was constructed across the river. At that point solid bluffs of rock rise on either side, affording a splendid site. The natural fall of the American gives as great a force as any other stream west of the Rocky Mountains, and the artificial assistance rendered by the dam creates added power. From the canal the water falls upon turbine wheels. Five generators produce the electric power, and it is transmitted to Sacramento City by four circuits on two sets of poles, so as to guard against breakages and accidents. The distance of the generators from Sacramento is 22.4 miles. The Sacramento Electric, Gas and Railway Company receives and controls this power. Each of the five generators produces one thousand horsepower. In addition, the company receives current at 40,000 volts from the Bay Counties Company's power plant that is located on the North Yuba, 35 miles above Marysville. This power is transmitted to Sacramento over a circuit 64.2 miles in length. With the combined power so received the street car lines of the company in Sacramento City and suburbs are operated. The lighting of the city is from this source. It also furnishes an aggregate of over three thousand horsepower for manufacturing purposes in and about the city.

The Central California Electric Company derives its power from abrupt drops in the canals of the South Yuba Water Company, located in Placer and Nevada counties. The water company has an immense storage system for municipal supply, irrigation, and water power, and maintains twenty reservoirs on the divide, or in the upper foothills, thirteen distributing reservoirs in the lower foothills, and four hundred miles of canal.

The natural fish in the rivers are salmon, sturgeon, pike, perch, hardheads, and dace. Those planted are striped bass, black bass, shad, and three kinds of catfish. The only fish propagated is the salmon, in the headwaters of the Sacramento. All of the planted fish have multiplied satisfactorily. In the open season large numbers of salmon and other fish are taken and sold in the local and San Francisco markets.

In the line of game, there are geese, ducks, quail, curlew, doves, and larks. All but the geese are protected. The ducks are mostly migratory. Of the non-migratory species are the mallard, spoonbill, and wood duck.

One can drive in any direction, at any time of the year, with no inconvenience, over roads that favorably compare with the streets in many towns elsewhere in the State. All of the bridges and roads are free for travel.

On the American River, in what is called the Folsom District, dredge mining is being carried on. The area of gravel so far acquired for dredge purposes is about 5,000 acres. These mining operations are in the hands of people with plenty of capital and skilled engineers.

Sacramento City, the capital of California and the county seat of Sacramento County, is situated on the east bank of the Sacramento River. The distance by rail from San Francisco is 90 miles. The imposing State capitol building, that cost about $3,000,000, is one of the finest of its kind in the United States. It stands in the middle of a park of thirty-eight acres, almost in the heart of the city. At the east side of the park is located the Exposition Pavilion of the State Agricultural Society, and also the State Printing Office and Bindery. The Federal building, of red sandstone, costing $150,000, accommodates the postoffice, the revenue and land offices, and the weather bureau station. The waterworks are the property of the city. The natural-gas wells in the city yield an abundance of gas for domestic purposes—heating and cooking.

STATISTICS OF SACRAMENTO COUNTY FOR 1906.

General Statistics.

Area, 987 66/100 square miles, or 632,108 acres.	
Number of farms	1,650
Number of acres assessed	607,500
Value of country real estate	$10,409,390
Of improvements thereon	$1,619,740
Of city and town lots	$10,073,270
Of improvements thereon	$9,309,030
Of personal property	$5,702,111
Total value of all property	$37,113,540
Expended on roads, last fiscal yr.	$60,826
Expended for bridges, last fiscal year	$101,840
Number of miles of public roads	1,090
Road levy per $100, 1906	40 cts.
Value of county buildings	$473,150
Irrigating ditches—miles, 25; cost	$75,000
Railroads, steam—miles, 90.25; assessed value	$1,634,035
Railroads, electric—miles, 30½; assessed value	$70,700
Electric power plants—2; assessed value	$300,000
Electric power lines—miles, 54; assessed value	$100,000
Number of acres irrigated	31,000

Wines, Brandies, Etc.

Number of wineries, 8; number of distilleries, 8; number of breweries, 2.

	Gallons.
Wine—Angelica	40,857
Claret	1,140,530
Muscatel	65,774
Port	500,284
Sherry	850,758
Tokay	23,448
Totals	2,621,651
Beer (barrels)	123,169
Brandy (gallons)	391,386
Cider (barrels)	195
Vinegar (barrels)	175

Fish Industry.

	Pounds.
Salmon	777,187
Catfish	534,771
Bass	174,200
Shad	148,294
Other kinds	52,675
Total	1,687,127

STATISTICS OF SACRAMENTO COUNTY, 1905-6—Continued.

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.
Apples	394,100
Apricots	2,328,000
Asparagus*	19,161,010
Blackberries	83,347
Beans	131,885,000
Beets	152,000
Cabbage	2,520,000
Celery	220,000
Corn	88,000
Cherries	217,812
Figs	100,000
Grapes	14,338,800
Lemons (boxes)	3,400
Nectarines	14,000
Onions	28,134,000
Oranges (boxes)	25,000
Pears	7,828,225
Peaches	11,168,984
Peas	268,000
Plums and prunes	12,491,406
Irish potatoes†	969,000
Sweet potatoes‡	2,500
Strawberries §	5,222,000
Dried—	Pounds.
Almonds	640,000
Apples	37,000
Apricots	420,000
Beans	131,750,000
Figs	45,000
Nectarines	11,000
Onions	28,100,000
Pears	220,000
Peaches	1,250,000
Peas	110,000
Prunes	2,012,000
Walnuts	22,000
Total	164,617,000
Canned—	Cases.
Apples	785
Apricots	29,000
Blackberries	1,200
Beans	250
Cherries	1,230
Grapes	8,500
Pears	52,000
Peaches	110,000
Plums	3,000
Strawberries	1,600
Tomatoes	39,400
Total	246,965

Poultry and Eggs.

	Dozen.	Value.
Chickens	17,500	$87,500
Ducks	350	2,100
Geese	150	1.800
Turkeys	1,300	31,200
Eggs	745,291	186,322
Total value		$308,922

* Most of the asparagus is canned.
† Sacks; 111,125,000 pounds.
‡ Sacks; 312,500 pounds.
§ Includes raspberries and loganberries.

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.
Wheat	45,000	18,250
Barley	14,100	7,050
Oats	92,000	18,400
Corn	800	523
Total cereals	151,900	44,223
Grain hay	3,500	23,000
Grass hay	62,500	62,500
Total hay	66,000	85,500

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	26,571	1,300	27,871
Apricot	91,129	30,000	121,129
Cherry	20,384	8,500	28,884
Fig	1,250	2,900	4,150
Lemon	3,000	900	3,900
Olive	12,500	6,300	18,800
Orange	35,500	21,500	57,000
Peach	343,764	30,000	373,764
Pear	287,740	47,000	334,740
Plum and prune	327,677	88,000	415,677
Quince	1,750	----	1,750
Other kinds	18,537	1,500	20,037
Almond	65,568	30,000	95,568
Walnut	1,770	1,820	3,590
Raisin grapes (acres.)	940	----	940
Table grapes (acres.)	5,700	----	5,700
Wine grapes (acres.)	9,750	9,250	19,000
Total acres grapes	16,390	9,250	25,640
Blackberries (acres.)	190	----	190
Raspberries and loganberries (acres.)	250	----	250
Strawberries (acres.)	750	----	750
Total acres berries	1,190	----	1,190

Livestock Industry.

	Number.	Value.
Cattle—Beef and stock	32,397	$619,825
Dairy Cows	10,800	270,000
Calves	7,200	36,000
Swine	40,250	161,000
Horses—		
Thoroughbred	1,100	330.000
Standard-bred	1,800	270,000
Common	14,150	1,061,250
Colts	3,600	36,000
Mules	3,000	390,000
Sheep—Common	77,600	232,800
Lambs	17,500	35,000
Common Goats	200	400
Wool (pounds)	242,500	------

Dairy Industry.

	No.	Production.
Creameries	9	--------
Skimming stations	21	--------
Butter (pounds)	--	1,578,751
Cheese (pounds)	10	549,219

STATISTICS OF SACRAMENTO COUNTY, 1905-6—Continued.

Forest Products.

	Amount.	Value.
Charcoal (sacks)	29,500	$11,800
Fuel, wood (cords)	35,000	210,000
Sash and door factories	------	35,000
Total value		$256,800

Miscellaneous Products.

	Pounds.	Value.
Bees (hives)—number, 1,750	------	$5,250
Beeswax	1,600	400
Flowers and plants (acres)	25	------
Honey	57,000	4,560
Hops	3,986,960	------

Manufactories.

	No.	No. of Employes.	Quantity Produced.	Value. of Product.
Bookbinderies	2	10	------	------
Paper boxes	1	3	------	------
Wood boxes	2	41	------	------
Brick (thousand)	1	70	17,500	------
Brooms (dozen)	2	6	4,000	------
Carriages and wagons	4	75	------	------
Cigars (thousand)	17	65	2,464	$110,880
Confectionery	8	118	------	89,000
Cooper shops	2	9	------	22,000
Crackers	1	18	------	82,000
Flouring mills (barrels)	4	130	300,000	------

Manufactories—Continued.

	No.	No. of Employés.	Quantity Produced.	Value. of Product.
Foundries and iron works	3	35	------	$55,000
Furniture	2	32	------	50,000
Leather goods	7	70	------	95,000
Machinery	11	175	------	450,000
Malt	5	15	------	130,000
Meat products—				
Hides (pounds)		--	640,000	64,000
Lard (pounds)		--	325,000	30,800
Meat packed (tons)	3	55	875	18,660
Tallow (barrels)		--	35,000	59,500
Pickles (gallons)	2	6	------	17,000
Pickled olives (gallons)		--	28,000	16,800
Iron pipe	1	40	------	222,149
Sewer pipe	1	4	------	12,000
Planing mills	7	125	------	360,000
Potteries	3	10	------	5,000
Artificial stone	6	35	------	115,000
Marble	6	30	------	97,000
Syrups and extracts	7	28	------	130,000
Tin and galvanized iron	8	152	------	219,690
Willow and woodenware	1	2	------	5,000
Fruit baskets	2	70	------	175,000
Tents and awnings	3	12	------	15,000
Barley, rol'd (tons)		--	29,000	------
Cornmeal (barrels)		--	13,000	------
Middlings (tons)		--	2,000	------
Bran (tons)		--	3,000	------

SAN BENITO COUNTY.

San Benito is larger in area than Rhode Island, with its population of half a million; this county has a population of about 6,000.

San Benito County is 95 miles south of San Francisco. It lies 25 miles inland east of the quaint old town of Monterey, and 15 miles east of Moss Landing, on Monterey Bay. The average precipitation is 12 inches annually, which all falls between November and April. In some of the valleys the rainfall is never less than 18 to 20 inches.

The county is 70 miles in length, and averages about 21 miles in width. From Tres Pinos south, the county opens out like a fan, stretching away for miles, following the course of the Tres Pinos Creek and the San Benito River. It is inclosed on two sides by mountains: on the east by the Mount Diablo or Mount Hamilton range, and on the west by the Gabilan range. From these ranges the surface slopes to the valley of the San Benito River, which flows northwesterly through the middle of the county and empties into the Pajaro River, which in turn empties into Monterey Bay, winding through a gap that gives to the county the refreshing ocean breezes.

Hollister, the county seat, is a beautiful town. It is well laid out with cement walks, graded streets, and magnificent shade trees; it has a sewer system, gravity system of water works, and electric light and gas works. The town is well supplied with schools and religious facilities. All the standard fraternal orders are represented by lodge meetings in fine lodge rooms supported by the town.

San Benito County has many elements vitally necessary to be considered in the selection of a home or place of business. Climate is one of its chief attractions. Proximity to the coast makes it a pleasant one, and the fact that is not right on the coast renders it suitable for those who can not live too near the ocean. Sufferers from asthma, lung trouble or catarrh can here find a climate that will at least benefit, if not cure. Mineral springs of different kinds abound, and beautiful mountain scenery can be enjoyed from every front door.

The soil of San Benito County is chiefly sediment, light and loamy. The soil in the valleys is mostly a rich, deep sediment or alluvium. This is particularly true around Hollister, in the San Juan Valley, and at San Felipe. Good public highways lead in and out of Hollister to the west, to the north, to the south, to the southeast, and to the east. These roads are all hard, well graded, and in good condition the year round.

In the southern part of the county are situated the famous New Idria quicksilver mines, the largest producer in the world.

In the way of gorgeous mountain scenery the county presents the Vancouver Pinnacles, the largest conglomerate mass of bowlders in the world, covering seven sections of land and rivaling in beauty the famous Yosemite Valley or the Grand Cañon of the Colorado.

In the Hollister and San Juan valleys poultry-raising has become one of the leading industries, and it is successful beyond anticipation by reason of climatic conditions. The capital required for a start in the poultry business is infinitesimal. Newcomers, even though not experienced, have no difficulty in meeting with success.

The climate is peculiarly adapted to the successful raising of poultry. The trade winds reach the valley after passing over the distance from the coast, shorn of their chill, yet cooling the heat of summer so that it is free from extremes, fog and winds. A person can take five acres in the San Juan or Hollister valleys, embark in the raising of poultry, give the business intelligent attention, and be in possession of a cash income three months after he has finished his improvements.

Hay is the main export. Hollister is the largest single shipping point in the State, the average shipments amounting to 25,000 tons annually. Hollister hay is shipped east to Chicago, New York, St. Louis, Cincinnati, Memphis, Lexington, and other points. The fine quality is due to superior climatic conditions—absence of fogs, extreme heat or cold—making a perfect sun-cured hay. The largest hay warehouses in the world are at the Hollister station, furnishing steady employment to several crews the year round.

Large quantities of grain are shipped, in addition to the large quantities retained at home for use as poultry food. Barley and oats are among the principal products.

There is also shipped a large amount of fruit, consisting principally of prunes, apricots and pears. Walnuts and almonds are receiving some attention.

Other shipments are wine, hogs, cattle, horses, poultry, and eggs.

With San Benito recognized as the section preëminent for successful poultry-raising, the already large business is bound to increase. The demand for incubators, brooders, and other appliances will justify the establishment of a factory here. The poultry business is a demonstrated success.

A thousand acres can profitably be set out in strawberries and other small fruits to fill the demand from near by markets. For the vineyardist there is land at a low figure. Land can be rented on shares, the renter only taking the risk of labor and seed. Many of our prosperous farmers to-day secured their start by renting land.

The San Benito River furnishes winter irrigation to about 3,000 acres in Hollister Valley. This water is used in orchards and on dairy farms; one flooding generally suffices for the former, and two floodings generally keep the pastures green late into the summer. Where land can not be irrigated from the river, pumping from wells is resorted to. The average cost of pumping irrigation can be figured at $1.25 per acre. In almost every section a supply of water can be reached at an average depth of 80 feet. Fifteen miles south of Hollister is the site of an immense storage reservoir. This reservoir, catching and holding the flood water of the San Benito River, will furnish sufficient for summer irrigation.

In the foothills there is room for a hundred thousand beehives. The sagebrush bloom and countless varieties of wild flowers furnish nectar the greater part of the year.

Thousands of acres in the Hollister and San Juan valleys are suitable for seed farms. The seed farms now under cultivation in the vicinity

of Hollister show conclusively that the industry is practicable and successful.

Orchards are fast supplanting the hay and grain fields, and adding materially to the wealth of the county. Orchardists are making money wherever they give attention to the business. The San Juan Valley has 10,000 acres especially adapted to the raising of apples, with a market at every man's door. Apricots, prunes, peaches, walnuts, almonds, in fact every fruit, save tropical, can be grown with profit in any section that can be reached with water.

Among the varied industries of the county, that of dairying is rapidly forging to the front, adding to the wealth of the community generally, and making the dairymen independent. The standard feed is alfalfa, which grows to perfection. Underground streams of water are abundant in all sections of the county, and to the extension of the pumping system is largely due the development of the dairy business.

Scattered all through the county are innumerable cheese factories, some of them worked upon the coöperative plan, but others are individual enterprises. All are meeting with success. In one of the suburbs of Hollister there has recently been established the Alpine Evaporated Cream Factory. This installation requires many tons of milk daily to meet the demand for its product.

A careful estimate is given of the number of cows that can be kept upon an acre of alfalfa. Where the growth is vigorous and constant, a cow and a half to the acre will give the animal plenty of feed and allow of storing for winter, but the average is one cow to the acre. The best cows will net a profit of from $4 to $5 per month, or $50 a year upon the average. The climate of the county is ideal for this business.

Vegetable-growing for markets outside the State is an assured and popular occupation. All varieties of vegetables are grown to perfection with and without irrigation. The green vegetable shipments are principally cabbage, cauliflower, celery, onions, and potatoes. Truck-gardeners plant and harvest every month in the year.

The raising of beets has met with success. It is one of the most important branches of agriculture, and gives promise of still greater development. The advantages are: early maturity of the beets, earlier opening of the campaign, longer season for harvesting, longer run of the factory, greater yield per acre, greater per cent of saccharine, immunity from frost and rain at critical periods. The sale of beets is contracted for at the time of planting. The tops are sold to dairymen.

In the artesian belt hop-growing is quite an important industry, and the business is profitable. In the same section tobacco has been successfully grown.

The county produces quicksilver, lime, antimony, hematite, manganese, gypsum, coal, asbestos, and copper. Traces of gold and silver have been found in the mountain ranges. Within three miles of Hollister is an immense bed of pottery clay. In the eastern range ledges of copper have been found which have been pronounced by experts to be another Iron Mountain.

The Southern Pacific Company runs passenger trains daily between San Francisco and Hollister, also one freight.

Tres Pinos, 6 miles south of Hollister, is reached by two trains daily on the Southern Pacific. It is one of the most important shipping points of the county, being the depot for the product of the New Idria

quicksilver mines, and the Cienega limekilns. It is the site of immense hay and grain warehouses. The shipments also include livestock, poultry, fruit, and general merchandise.

STATISTICS OF SAN BENITO COUNTY, 1905-6.

General Statistics.

Area, 1,056 square miles, or 676,000 acres.	
Number of farms	1,150
Number of acres assessed	559,676
Value of country real estate	$3,971,240
Of improvements thereon	$638 375
Of city and town lots	$320,615
Of improvements thereon	$438,040
Of personal property	$1,165,980
Total value of all property	$6,534,250
Expended on roads, last fiscal yr.	$18,399
Expended for bridges, last fiscal year	$3,600
Number of miles of public roads	414
Road levy per $100, 1906	33 cts.
Value of county buildings	$57,500
Irrigating ditches—miles, 20; cost	$50,000
Railroads, steam—miles, 17.65; assessed value	$286,992
Electric power plants	1
Electric power lines, assessed value	$15,050
Number of acres irrigated	3,500

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	18,340	1,400	$37,800
Barley	21,281	12,320	246,400
Oats	5,125	------	1,750
Corn	200	------	--------
Total cereals.	44,946	13,720	$285,950
Alfalfa hay	2,000	8,000	$64,000
Grain hay	------	45,000	385,000
Total hay	------	53,000	$449,000

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	16,805	2,624	19,429
Apricot	40,690	4,410	45,100
Cherry	2,200	------	2,200
Peach	9,025	2,200	11,225
Pear	9,295	650	9,945
Prune	116,560	2,000	118,560
Almond	4,890	600	5,490
Walnut	405	------	405
Total fruit trees	199,870	12,484	212,354

Table grapes (acres)	15	----	15
Wine grapes (acres)	117	----	117
Total acres grapes	132	----	132
Blackberries (acres)	25	----	25
Currants (acres)	12	----	12
Gooseberries (acres)	3	----	3
Loganberries (acres)	5	----	5
Raspberries (acres)	15	----	15
Strawberries (acres)	18	----	18
Total acres berries	78	----	78

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	1,437,500	$8,000
Apricots	1,000,000	25,000
Blackberries	25,000	1,000
Beans	3,000	900
Beets	8,000	80
Cabbage	200,000	2,000
Celery	20,000	400
Corn	200,000	4,000
Currants	20,000	800
Cherries	20,000	1,000
Gooseberries	2,000	100
Grapes	400,000	5,000
Loganberries	25,000	1,000
Pears	1,000,000	5,000
Peaches	2,000,000	17,000
Irish potatoes	550,000	5,500
Raspberries	5,000	200
Strawberries	100,000	4,000
Tomatoes	80,000	1,200
Totals	7,095,500	$82,180

Dried—	Pounds.	Value.
Almonds	30,000	$4,500
Apples	50,000	7,500
Onions	30,000	1,950
Pears	20,000	2,000
Peaches	60,000	5,400
Prunes	4,800,000	100,000
Walnuts	20,000	2,000
Totals	4,980,000	$123,350

Livestock Industry.

	Number.	Value.
Cattle—Beef	15,220	$228,290
Stock	2,120	53,005
Calves	8,307	66,455
Swine	3,129	7,040
Horses—		
Thoroughbred	34	6,850
Standard-bred	2,290	103,070
Common	1,895	47,385
Colts	1,690	33,815
Mules	50	2,000
Sheep—Common	13,420	33,550
Lambs	6,540	6,540
Common Goats	1,240	1,240
Total stock all kinds	55,935	$589,240
Wool (pounds)	5,000	500

Dairy Industry.

	No.	Production.	Value.
Creameries	2	------	------
Skimming stations	3	------	------
Butter (pounds)		26,000	$6,500
Cheese (pounds)		1,250,000	112,500
Condensed milk (cases)		2,400	7,500
Evaporated cream (cases)		45,625	193,363

STATISTICS OF SAN BENITO COUNTY, 1905-6—Continued.

Poultry and Eggs.

	Dozen.	Value.
Chickens	6,375	$31,875
Ducks	75	450
Geese	30	360
Turkeys	240	7,100
Eggs	1,026,520	256,630
Total value		$296,415

Miscellaneous Products.

	Pounds.	Value.
Bees (hives)—No., 15		
Honey	20,000	$2,000
Hops	12,000	1,720
Sugar beets (tons)	5,000	500
Macadam (tons)	65,000	32,500
Mineral water (gals.)	500	500
Quicksilver (flasks)	7,764	279,651
Rubble (tons)	64,988	32,494

Forest Products.

	Amount.	Value.
Fuel, wood (cords)	5,000	$45,000

Power used for mills and manufactories in county: Steam—number, 10; electrical—number, 1; water—number, 1.

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value of Product.
Cigars (thous'd)	1	4	1,600	$64,000
Confect'ry (lbs)	3	6	17,500	$3,500
Lime (barrels)		--	15,000	15,000
Malt (tons)	1	--	100	6,000
Hides (pounds)		--	52,000	5,720
Lard (pounds)		--	52,000	6,500
Tallow (barrels)		--	25	100
Planing mills	1	2	.....	3,000

SAN BERNARDINO COUNTY.

San Bernardino is not only the largest county in California, but it is the largest in the United States. It is larger than New Hampshire, Vermont, and Rhode Island combined; larger than New Jersey, Delaware, Massachusetts, and Rhode Island combined; very nearly as large as Massachusetts, Connecticut, and New Jersey. There are eight states whose area is less than that of this county.

San Bernardino County is in the southeastern part of the State. The greater portion is desert. In the north is the Mojave Desert; and in the east, the northern end of the Colorado Desert; the arable portion being confined to the southwestern part—the San Bernardino Valley. This valley forms an almost perfect amphitheater, encircled by mountains and hills, open only on the west, allowing the sea breeze from the ocean to sweep its entire length.

Mount San Gorgonio is perpetually snow-capped, and from it is derived much of the water used for irrigation in the summer in the valley below, the remainder coming from the mountain range, giving a bountiful supply for irrigators. The combined waters of the streams, springs, and artesian wells make this valley one of the best watered in Southern California.

The forests on the mountain ranges furnish the supply of lumber and timber used in the valley.

Mount San Bernardino, from its distinctive cone, has been adopted by the United States surveyors as the initial point for land surveys in Southern California, both base and meridian starting from its peak.

The northern and eastern parts of the county are almost absolutely sterile. Yet, along the Mojave River where it debouches from the mountains to the desert, and for many miles, the land on both sides is fertile, easily worked, and produces abundantly as long as the water supply is available.

The soil of San Bernardino Valley varies greatly with locality. In the eastern part it is a sharp gravel or sand, with a large admixture of alluvial deposits. West the soil changes to a heavy, dark loam, with occasional patches of adobe. Still farther west, the soil is of a lighter character, and possesses much more of the soda and potash constituents. Immediately about the City of San Bernardino the soil is a strong adobe, with appearances here and there of soda salts. Along the river bottoms the soil is a heavy clay, and in some places a black adobe. It is cold and damp, and not as suitable for fruit culture as for grazing and the growing of hay.

The rainfall varies a great deal, as does the climate. Passing from the lower levels to the high altitudes the rainfall increases. On the north and east of the mountain ranges, on the Mojave and Colorado deserts, the larger portion of the rainfall comes in July and August, with no rains during the winter. The rains are short, sharp, and heavy,

frequently accompanied by thunder and lightning, which latter is almost unknown south of the mountains.

In the number and character of irrigation enterprises, the county stands in the front rank. It has been justly called the "Mother of Irrigation," because here was dug the first irrigation ditch in the State, and here were raised the first crops by irrigation. It is over a hundred years since the mission fathers of San Gabriel established an outlying post, or sub-mission, just west of Redlands, and employed Indian labor to dig what is known as the zanja. This ancient ditch is still in use and within the same banks that were first thrown up by Indian labor almost a century ago.

There are hundreds of miles of canals and pipe-lines, with thousands of miles of laterals and individual pipe-lines. In addition to this, hundreds and hundreds of wells have been bored, each producing a flowing stream without other or further expense, which volume is sufficient not only to irrigate many thousands of acres, but also furnishes the magnificent supply which fructifies and renders fertile the great plain on which the city of Riverside stands.

Almost every variety of fruit can be produced in some part of this county. The only exceptions are those strictly tropical. In the mountain valleys and upon the upper plateaus, apples and cherries are grown. On the lower levels, all the deciduous fruits are produced. The production of oranges, lemons, and pomeloes is large, these fruits being grown to perfection. The production of oranges has increased rapidly during the last few years. The first planting of orange trees were two set out by Anson Van Leuven in his dooryard in Old San Bernardino in the early sixties, and by M. H. Crafts at Crafton, at about the same time or a little later.

In the western part, in the Rialto, Etiwanda, and Cucamonga neighborhoods, there is produced a large quantity of raisins. Another section of the county especially adapted to the culture of grapes is that about Hesperia, which lies along the Mojave River.

In the southwest corner of the valley is located the Chino Ranch, on which is the third largest beet-sugar factory in the world. The acreage devoted to sugar-beet culture is in the neighborhood of 20,000. The factory has a capacity of about 12,000 tons of refined sugar annually. The culture of sugar-beets has been a profitable industry for the farmers. On this ranch are fattened thousands of head of cattle upon the beet pulp, which is siloed for that purpose.

Along the slope of the mountains, and in the mountain valleys and cañons, are numerous bee ranches, from which is produced a large amount of honey.

The raising of cattle and sheep is carried on along the mountain ranges and in the upper mountain valleys. Several large bands of sheep are grazed on the ranges. Dairying is carried on in both the upper and lower valleys. Pure-bred, or grades of high-class dairy cattle are in general use. A stock company for the breeding of the most desirable classes of horses has a large ranch at Victor to be devoted exclusively to their raising.

Wheat, oats, and barley are grown in considerable quantities, and alfalfa is raised with profit.

Vegetables of nearly all descriptions are raised, the yield being large, and a growing shipping trade to outside markets has been established.

The northern and eastern portions are heavily mineralized, and although prospecting has been carried on for fifty years, new and greater finds are being made every year. Almost every known mineral has been discovered. Gold, silver, copper, iron, tin, lead, borax, soda, and nitrates are found in abundance and scattered over a wide area. Some of the richest silver mines in the State are in this county. Copper exists in great abundance. The high cost of freight, the scarcity of water, which renders the life of the prospector precarious as well as interfering with the working of the mines, the scarcity and high cost of fuel—all combined have limited prospecting and retarded mining development. The building of railroads across the desert has partially removed some of these obstacles, and mining recently has been prosecuted with more vigor.

STATISTICS OF SAN BERNARDINO COUNTY, 1905-6.

General Statistics.

Area, 20,160 square miles, or 12,900,400 acres.	
Number of farms	4,210
Number of acres assessed	630,860
Value of country real estate	$6,787,615
Of improvements thereon	$2,991,030
Of city and town lots	$2,193,825
Of improvements thereon	$3,147,985
Of personal property	$1,780,590
Total value of all property	$17,020,177
Expended on roads, last fiscal yr.	$85,373
Expended for bridges, last fiscal year	$13,264
Number of miles of public roads	1,463
Road levy per $100, 1906	55 cts.
Value of county buildings	$435,000
Irrigating ditches and pipe lines, cost	$1,938,300
Railroads, steam—miles, 1,109⅓; assessed value	$8,619,563
Railroads, electric—miles, 40½; assessed value	$67,715
Elect'c power and light plants—5; electric power and light lines—159½ miles; assessed value	$102,050
Number of acres irrigated	42,350
Toll roads, 11 miles; assessed value	$25,000

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Barley	10,307	7,730	$154,600
Corn	825	825	24,000
Total cereals	11,132	8,555	$178,600
Alfalfa hay	3,500	21,000	$252,000
Grain hay	7,900	15,850	174,350
Grass hay	1,400	2,935	44,025
Total hay	12,800	39,785	$470,375

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	14,150	1,500	15,650
Apricot	35,800	900	36,700
Cherry	10,000	1,350	11,350
Fig	2,300	500	2,800
Lemon	185,000	22,000	207,000

Fruit Trees and Vines—Continuod.

	Bearing.	Non-Bearing.	Total.
Nectarine	1,800	600	2,400
Olive	50,500	800	51,300
Orange	1,650,700	867,000	2,526,700
Peach	13,000	1,500	14,500
Pear	18,000	1,200	19,200
Plum	1,500	500	2,000
Prune	2,500	800	3,300
Walnut	4,500	500	5,000
Limes	1,800	500	2,300
Pomelo	4,800	1,600	6,400
Total fruit trees	1,996,350	901,250	2,897,600
Raisin grapes (acres)	600	153	753
Table grapes (acres)	441	28	469
Wine grapes (acres)	14,669	187	14,856
Total acres grapes	15,710	368	16,078
Blackberries (acres)	10	----	10
Loganberries (acres)	2	----	2
Raspberries (acres)	1	----	1
Strawberries (acres)	13	----	13
Total acres berries	26	----	26

Wines, Brandies, Etc.

Number of wineries, 6.

	Gallons.	Value.
Wine—Angelica	250,500	$62,625
Burgundy	1,000	200
Claret	1,150,000	172,500
Hock	150,000	30,000
Muscatel	6,200	1,240
Port	125,000	31,250
Riesling	5,800	2,176
Sherry	18,500	4,625
Zinfandel	115,000	25,300
Totals	1,822,000	$329,016
Brandy	30,380	$15,190

Dairy Industry.

	No.	Production.	Value.
Dairies	8	------	------
Skimming stations	1	.....	.....
Butter (pounds)		209,500	$73,325
Cheese (pounds)		250,182	35,025
Cream (gallons)		10,614	10,614

STATISTICS OF SAN BERNARDINO COUNTY, 1905-6—Continued.

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	178,000	$35,610
Apricots	196,000	4,900
Blackberries	40,000	4,000
Beets	90,000,000	202,500
Corn	1,650,000	20,625
Cherries	160,000	9,600
Figs	20,000	1,000
Grapes	93,260,000	705,920
Grape-fruit (boxes)	18.100	36,200
Lemons (boxes)	156,000	468,000
Loganberries	8,200	820
Melons	400,000	4,000
Onions	241.000	4,800
Oranges (boxes)	3,264,000	6,539,800
Olives	1,734.000	34.680
Pears	200,000	6,000
Peaches	2,879,600	57,592
Plums	140,000	4,200
Irish potatoes	2,350,000	29,375
Sweet potatoes	50,000	1,000
Prunes	120,000	4,800
Raspberries	8,000	800
Strawberries	55,000	5,500
Tomatoes	154,000	4,620
Total value		$8,186,342

Dried—	Pounds.	Value.
Apricots	1,141,000	$148,330
Figs	20,000	2,000
Peaches	968,000	96,800
Prunes	250,000	10,000
Raisins	2,000,000	80,000
Walnuts	125,000	15,000
Totals	4,504,000	$352,130

This county reports, under the head of canned fruit, 3,000 cases of apricots, worth $6,000.

Livestock Industry.

	Number.	Value.
Cattle—Beef	5,500	$220,000
Stock	4,000	80,000
Thoroughbred	210	31,500
Dairy Cows—Graded	1,250	50,000
Calves	2,370	23,700
Swine	4,180	41,800
Horses—		
Thoroughbred	65	69,200
Standard-bred	10,420	1,302,500
Common	1,000	75,000
Colts	830	16,600
Sheep—Imported	100	10,000
Common	10,000	30,000
Lambs	7,500	15,000
Total stock all kinds	47,425	$1,965,300
Wool (pounds)	40,000	$4,000

Poultry and Eggs.

	Dozen.	Value.
Chickens	5,600	$25,200
Ducks	72	360
Geese	24	240
Turkeys	310	5,580
Eggs	572,000	171,600
Total value		$202,980

Forest Products.

	Amount.	Value.
Area of timber lands—		
Pine (acres)	118,000	$2,360,000
Sawmills, 3	.. ..	60,000
Fuel, wood (cords)	11,045	44,180
Lumber—Cedar (feet)	650,000	13,000
Pine (feet)	11,850,000	237,000
Sash and door factories, 1	..	60,000
Total value	..	$2,774,180

Power used for mills and manufactories in county: Steam—number, 29; electrical—number, 1; water—number, 6; gasoline, 4.

Manufactories.

	No.	No of Employés.	Quantity Produced.	Value of Product.
Wood boxes	2	32	------	$172,680
Brick (thous'd)	2	..	2,077	15,577
Cement (tons)	1	118	21,300	190,000
Cigars (thous'd)	3	6	369	15,735
Clothing	5	10	------	30,850
Confect'ry (lbs.)	6	10	74,880	18,728
Flouring mills (bbls.)	2	15	59,116	236,465
Foundries and iron works	2	8	------	49,000
Leather goods	3	10	------	17,000
Lime (bbls.)		...	183,006	201,312
Machinery	4	620	------	531,747
Meat products—(pounds)	2	63	562,000	393,400
Hides		...	362,000	362,000
Lard (lbs.)		...	52,000	4,680
Tallow (lbs.)		...	181,000	7,240
Olive oil (gals.)		...	905	13,575
Pickled olives (gals.)	2	...	13,600	10,880
Iron pipe (ft.)	2	...	100,000	70,000
Cement sewer pipe (ft.)	2	...	26,000	34,100
Planing mills	8	29	------	195,000
Artificial stone	3	10	------	34,675
Granite	1	1	------	2,000
Marble (tons)	1	15	500	20,000
Marble dust (tons)	2	38	6,800	22,500
Sugar, beet (tons)	1	350	4,750	522,500
Stone paving blocks (cu. ft.)	1	7	540,000	26,500
Tin and galvanized iron	8	29	------	99,000
Wood turning and carving	3	3		5,000
Rubble (tons)	2	130	229,185	229,185

Products Shipped Out of State.

Of products shipped out of the State, San Bernardino County reports 1,141,000 boxes of fresh apricots, 3,000 boxes of dried apricots, 18,100 boxes of grape-fruit, 600,000 pounds of fresh grapes, 156,000 boxes of lemons, 3,264,900 boxes of oranges, 197,115 barrels of flour, 96,800 pounds of dried peaches, 2,000,000 pounds of raisins, 30,000 pounds of walnuts, 12,000 pounds of beeswax, 4,000 pounds of honey, 5,970 cases of fruit preserves, and 33,956 tons of crude borax.

STATISTICS OF SAN BERNARDINO COUNTY, 1905-6—Continued.

Miscellaneous Products.	Amount.	Value.
Bees (hives)—No., 17,000	------	$51,000
Beeswax (pounds)	12,000	3,000
Flowers and plants (acres)	15	73,436
Honey, almost total failure (pounds)	40,000	2,000
Sugar beets (tons)	45,000	202,500

Miscellaneous Products—Continued.	Amount.	Value.
Ice plants, 5; (tons)	45,195	$271,170
Orange marmalade	------	11,943
Gold	------	473,983
Silver	------	15,595
Copper	------	8,206
Crushed rock (tons)	9,000	9,000
Borax, crude (tons)	33,956	848,890

SAN DIEGO COUNTY.

San Diego County occupies the southern part of the State, and has an area slightly larger than Massachusetts. The Pacific Ocean washes its shores for upward of 75 miles. The land rises gently from the ocean for a distance of about 50 miles to a chain of peaks forming the backbone of the county, descending again quite rapidly to the Colorado River Valley, the greater part of which is below sea-level.

The arable portion of the western slope is divided into a series of irregular terraces or plateaus. The lower or coast terrace comprises a number of valleys with the intervening mesas. This large acreage is practically frostless. Next come a series of higher valleys, Poway Valley, varying in elevation from 400 to 500 feet. The third terrace, the altitude of which ranges from 1,000 to 2,500 feet, comprises the foothill region, with numerous smaller intervening valleys, nooks, and glens. Next comes the mountain region. The area of tillable land in these valleys and mesas is approximately 600,000 acres, a still larger area being suited to pasturage and grazing. The elevation of the mountain valleys varies from 2,500 to 4,500 feet. They are chiefly devoted to stock-raising, but many of them are well adapted to the growing of small fruits and vegetables and to diversified farming.

The arable soil of the county may be classed under two heads: granitic and adobe; though there is often a mixture of both, resembling adobe.

To the east of the mountains, in the delta of the Colorado, is the famous Imperial Valley. After many months of labor, and a large expenditure of money, a generous share of the flow of the Colorado River has been diverted into this great valley, the first delivery of water for irrigation being made in June, 1901, and so rapidly have the main canals and laterals been extended that many thousands of acres are now under cultivation, this rapid development affording employment and resulting in the building of homes for thousands of settlers, thus adding millions to the wealth of the county. The center of this wonderfully fertile section is reached by a spur from the main line of the Southern Pacific Railroad. The central town is Imperial. There is a good hotel, an ice factory, creamery, and other evidences of prosperity. What until recently was described in our geographies as the dreaded Colorado Desert, bids fair to soon become the leading stock and dairy section of the great Southwest.

The intermountain region, the hills and valleys between the plains of Imperial and the western slope of the county, is rich in minerals, and affords excellent pasturage for several thousand cattle. The mineral wealth of San Diego County, though known to be great, is largely undeveloped, and offers an excellent field for the prospector and capitalist. Lepidolite and amblygonite, containing lithia and other valuable products, exist in greater quantities than in any other known deposit

in the world. San Diego is producing the finest tourmaline in the United States. The crystals are of exceptional hardness, possess exquisite delicacy of coloring, and when cut form gem-stones of great brilliancy. Kunzite, a new gem, not found in any other part of the world, was recently discovered at Pala, and is attracting a greal deal of attention. Gem experts are manifesting a deep interest in the remarkable crystallizations found in San Diego County.

According to a bulletin on the "Climatology of California," recently published by the U. S. Department of Agriculture, San Diego County has the heaviest and most reliable rainfall of any part of Southern California. The rainfall increases, and greater extremes of temperature occur, as you leave the coast, the higher mountain peaks being often covered with snow to quite a depth during a part of the winter.

Water is impounded mainly for the citrus orchards of the coast section, the higher valleys requiring but little or no irrigation for their crops of cereals, deciduous fruits, olives, vegetables, etc.

As an evidence that education keeps pace with the population, there are more than one hundred and fifty school houses distributed through the county, the instruction in which is up to the usual high standard found throughout California.

The Board of Supervisors has done and is doing good work in the way of road-building, the most distant and mountainous places being readily reached over excellent highways.

The orange, lemon, and pomelo, or grape-fruit, do well. The largest single lemon grove contains about 800 acres.

Raisin grapes are a profitable crop, and the industry has a bright future. The wine industry is large and growing.

Olive-growers are making money. An olive grove, to be a commercial success, should be set out with a view to supplying pickling fruit, oil olives being treated as a by-product. The demand for pickled ripe olives is already in excess of the supply, and steadily growing.

Peaches, apricots, pears, quinces, plums, cherries, and other deciduous fruits do well. The mountain region around Julian has attained a special reputation for the crisp, finely flavored apples.

A good walnut orchard, properly located with reference to soil and water, is a safe investment. Small areas well suited to this crop may be found in different parts of the county—notably in the Tia Juana Valley. Almonds do well, and there are some thriving orchards.

San Diego County is celebrated for its deliciously perfumed and fine-flavored honey, which always finds a ready market at top prices. The apiaries are located for the most part among the hills and valleys back from the coast.

There is reason to believe that the cultivation of the silkworm may hold a most important part in the industrial development of San Diego County—the climatic conditions are so perfectly adapted to the delicate constitution of the worm, and the foliage of the mulberry may be had in such wholesome condition practically during the entire year. Many acres have been set out to mulberry trees, and those interested feel greatly encouraged over the outlook.

The dairy industry has shown a healthy growth, having trebled in the past four years.

The modern city of San Diego was founded by A. E. Horton, in 1867. The situation is not only sanitary and attractive, but it is also admir-

ably adapted for a large ocean commerce. Numerous wharves extend into deep water, and in their neighborhood may be found lumber yards, planing-mills, warehouses, foundries, etc. The electric street railway system is equipped with modern cars and complete in every respect. Water is provided in abundance, the supply and distribution being controlled by the municipality. The streets of the city are well lighted by electricity. The schools, private and public, have an excellent reputation. A fine, large opera-house, perfect in its appointments, is on the circuit of the very best theatrical and operatic companies. There are also several smaller theaters. The different religious organizations worship in attractive edifices; secret societies and benevolent associations have their lodge-rooms, and numerous musical and literary clubs are supported by an active membership. There are several strong banking institutions. The hotel accommodations are excellent, and there are a number of sunny modern lodging-houses. San Diego is thrown into special prominence as being the first port of call on the Pacific Coast of the United States north of Panama, and the magnificent bay, around the shores of which the city is built, will soon become an important naval rendezvous. The Government has concluded arrangements for the erection of a large coaling station here, and is fast completing the building of a modern military post at Fort Rosecrans, the big guns of which command the entrance to the bay.

Just across the bay from San Diego, ten minutes by ferry, is the peninsular city of Coronado, with its world-famous Hotel del Coronado and many beautiful homes.

National City, the second largest city, is situated on the southeast shore of the bay. The land here rises gently from the water-front, and is admirably suited for the location of manufacturing establishments or other plants requiring a comparatively large area of level ground with good water frontage. There are a number of attractive homes within the city limits and nestling among the lemon and orange groves in the fertile valleys near by. The church and school facilities of the place are excellent. A large manufactory of citrus products is in successful operation, turning out citric acid, oil of lemon, lemon extracts, etc. There is also an olive oil factory, and its product is equal to the best.

Passing through Old Town, you come to Pacific Beach, a very attractive suburb of San Diego. The land is quite level near the ocean, affording one of the widest, smoothest, hardest and most attractive beaches along the coast.

Escondido is some 35 miles northeast of San Diego, being connected by a spur with the main line of the Southern California Railway. A large area of productive country is tributary to Escondido, from which are made shipments of hay, grain, cattle, hogs, oranges, lemons, raisins, wine, honey, chickens, eggs, butter, etc. The school and church accommodations of the place are excellent.

STATISTICS OF SAN DIEGO COUNTY, 1905-6.

General Statistics.

Area, 8,580 square miles, or 5,491,200 acres.	
Number of farms	6,231
Number of acres assessed	1,355,843
Value of country real estate	$4,904,949
Of improvements thereon	$1,037,128
Of city and town lots	$9,154,720
Of improvements thereon	$4,225,252
Of personal property	$3,430,697
Total value of all property	$22,752,746
Expended on roads, last fiscal yr.	$54,863
Expended for bridges last fiscal year	$13,047
Number of miles of public roads	6,000
Road levy per $100, 1906	60 cts.
Value of county buildings	$350,550
Irrigating flumes, etc.—miles, 740; cost	$3,050,000
Railroads, steam—miles, 334⅔; assessed value	$3,052,216
Railroads, electric — assessed value	$90,800
Electric power plants—2; assessed value	$19,250
Electric power lines—miles, 20; assessed value	$35,000
Number of acres irrigated	153,668

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	52,104	12,223	$293,352
Barley	136,568	47,798	955,960
Oats	20,449	5,412	129,888
Corn	13,500	8,250	189,750
Total cereals	222,621	73,683	$1,568,950
Alfalfa hay	11,825	47,300	$473,000
Grain hay	125,000	125,000	1,250,000
Grass hay	7,100	7,100	28,400
Total hay	143,925	179,400	$1,751,400

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	51,362	20,841	72,203
Apricot	44,134	5,972	50,106
Cherry	4,744	1,500	6,244
Fig	15,000	2,600	17,600
Lemon	255,000	41,106	296,106
Olive	223,000	24,600	247,600
Orange	105,000	4,953	109,953
Peach	75,000	55,265	130,265
Pear	12,000	5,829	17,829
Plum	6,720	4,108	10,828
Prune	80,000	2,359	82,359
Almond	8,000	1,274	9,274
Walnut	7,000	3,234	10,234
Pomelo	15,000	2,320	17,320
Total trees	901,960	175,961	1,077,921
Raisin grapes, 4,000 acres	1,500,000	100,000	1,600,000
Table grapes, 1,945 acres	428,000	350,000	778,000
Wine grapes, 680 acres	260,000	12,000	272,000
Total grapes	2,188,000	462,000	2,650,000

Fruit Trees and Vines—Continued.

	Bearing.	Non-Bearing.	Total.
Blackberries, 50 acres	40,000	------	40,000
Loganberries, 75 acres	60,000	------	60,000
Strawberries, 45 acres	150,000	30,000	180,000
Total berries	250,000	30,000	280,000

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	2,000,000	$50,000
Apricots	1,500,000	37,000
Blackberries	250,000	12,500
Cherries	90,000	5,400
Figs	15,000	375
Grapes	3,360,000	84,000
Grape-fruit	436,800	12,480
Lemons (boxes)	257,464	617,914
Onions	12,000	1,500
Oranges (boxes)	76,768	134,344
Olives	5,400,000	135,000
Pears (boxes)	3,000	4,500
Peaches	330,000	9,900
Prunes	45,000	900
Cantaloupes (cars)	375	193,500
Watermelons (cars)	20	10,320
Strawberries	225,000	18,000
Total value		$1,327,633

Dried—	Pounds.	Value.
Almonds	40,000	$6,400
Apricots	75,000	10,125
Beans	300,000	7,500
Peaches	80,000	6,400
Prunes	95,000	4,275
Raisins	2,200,000	99,000
Walnuts	60,000	7,500
Totals	2,850,000	$141,200

Canned—	Cases.	Value.
Olives (quarts)	5,833	$30,620
Olives (pints)	4,166	29,162
Totals	9,999	$59,782

Wines, Brandies, Etc.

Number of wineries, 100; number of distilleries, 5; number of breweries, 1.

	Gallons.	Value.
Wine—Angelica	8,000	$2,400
Claret	300,000	48,000
Muscatel	3,000	900
Port	20,000	6,000
Riesling	2,000	400
Sherry	2,000	620
Totals	337,000	$58,320
Beer (barrels)	31,800	$254,400
Brandy	4,000	3,000
Cider	1,000	600

STATISTICS OF SAN DIEGO COUNTY, 1905-6—Continued.

Fish Industry.

	Pounds.	Value.
Various kinds	2,127,052	$106,353
Salt fish	1,000,000	35,000
Turtles	7,092	355
Lobsters	65,208	5,217
Totals	3,199,352	$146,925

Livestock Industry.

	Number.	Value.
Cattle—Beef	10,500	$367,500
Stock	48,319	1,207,975
Thoroughbred	69	6,900
Dairy Cows—Graded	13,296	474,000
Calves	7,332	51,324
Swine	33,005	264,040
Horses—		
Thoroughbred	59	8,850
Standard-bred	1,550	124,000
Common	12,243	428,505
Colts	2,209	24,180
Mules	1,204	72,240
Sheep—Common	11,530	46,120
Lambs	4,600	13,800
Common Goats	2,800	5,600
Total stock all kinds	148,716	$3,095,034
Wool (pounds)	600,000	$60,000

Poultry and Eggs.

	Dozen.	Value.
Chickens	38,500	$175,325
Ducks	1,650	9,075
Geese	600	5,400
Turkeys	1,650	33,000
Eggs	1,519,386	379,846
Total value		$602,646

Productions Shipped Out of State.

	Amount.
Barley (crushed)	1,440 tons
Apricots, dried	60,000 lbs.
Grape-fruit	3,120 boxes
Lemons	211,224 boxes
Oranges	54,288 boxes
Peaches, dried	80,000 lbs.
Prunes, dried	80,000 lbs.
Raisins	2,000,000 lbs.
Walnuts	60,000 lbs.
Beans, dried	200,000 lbs.
Beeswax	40,000 lbs.
Honey	1,140,000 lbs.
Wool	60,000 lbs.
Fish	501,090 lbs.
Cigars	2,718 C.
Olive oil	10,000 gals.
Olives, pickled	8,000 gals.
Cantaloupes (300 cars)	120,000 crates
Watermelons (15 cars)	6,000 crates
Olives, canned (quarts)	2,333 cases
Olives, canned (pints)	1,666 cases
Semi-precious gems (rough)	25,000 carats
Semi-precious gems (cut)	10,000 carats
Mineral waters (18 cars)	7,200 cases

Dairy Industry.

	No.	Production.	Value.
Dairies	195	------	------
Creameries	4	------	------
Skim'ing stations	4	------	------
Butter (pounds)	--	670,000	$167,500
Cream (gallons)	--	6,000	6,000

Forest Products.

	Amount.	Value.
Area of timber lands—		
(acres)	30,000	------
Pine (acres)	22,000	$220,000
Oak (acres)	8,000	80,000

Power used for mills and manufactories in county: steam—number, 10; electrical—number, 35; gasoline—number, 30.

Miscellaneous Products.

	Pounds.	Value.
Bees (hives) No., 75,000	------	$225,000
Beeswax	50,000	13,250
Honey	1,280,000	76,800
Alfalfa seed	25,000	2,500
Mineral water (cases)	8,000	48,000

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value of Product.
Bookbinderies	2	8	------	$9,500
Brick (thousand)	6	62	8,750	70,000
Brooms (dozen)	1	3	1,350	5,725
Cigars (thousand)	2	43	2,718	141,336
Coffee, spices, etc. (pounds)	2	8	326,000	85,000
Confect'ry (lbs.)	1	14	208,000	50,000
Barley mills (tons)	5	16	7,500	187,500
Foundries and iron works (tons)	5	83	1,465	117,850
Furniture (office)		9	------	20,000
Gasoline engines—number	1	20	100	50,000
Hides (pounds)	3	10	384,000	52,800
Lard (pounds)		--	30,000	3,000
Meat pa'ked (tons)		--	1,200	21,600
Olive oil (gals.)	4	40	14,600	36,575
Pickled olives (gallons)			10,000	5,000
Planing mills (ft.)	4	88	9,100,000	280,000
Salt (tons)	2	33	6,000	75,000
Soap (cases)	1	10	7,500	22,500
Artificial stone	3	23	90,000	28,500
Citric acid products (lbs.)	1	10	------	------
Sugar beet (tons)		--	72,000	30,960
Oil lemon (lbs.)		--	10,000	6,000
Gypsum (tons)		--	150	900
Liquid melade (gallons)		--	300	1,200
Lapidaries (carats)	6	20	18,142	162,560
Marine engines	1	10	72	44,400
Insect powder (lbs.)		--	6,000	3,000
Sal soda (lbs.)		--	720,000	10,800
Citrus washing powder (lbs.)		--	360,000	18,000

SAN JOAQUIN COUNTY.

San Joaquin County spans the great interior valley of California directly east of San Francisco Bay, extending from the coast mountains to the Sierras, and comprises the only natural gateway to that vast agricultural region stretching from the Mokelumne River to the Tehachapi. In most part, San Joaquin County is a level plain, every foot of which is cultivated or utilized for agriculture. Practically the whole area is fertile, but the different kinds of soil require different treatment.

San Joaquin County is better provided with natural facilities for the transportation of agricultural products than any other like area in America. The natural channels of the San Joaquin River and its branches supply 269 miles of navigable waterways in the county, and the work of reclamation has added navigable channels in many directions, making a network of water highways about 400 miles in total length.

Irrigation has made wonderful strides. Besides two great irrigation companies which distribute water from the Mokelumne and Stanislaus rivers, virtually the entire 250,000 acres of delta land is irrigated from the adjacent waters of the San Joaquin River. The truck gardens and small farms are many of them irrigated by pumps driven by windmills or gasoline engines. Water is abundant everywhere in San Joaquin County at a depth of from 15 to 25 feet.

Stockton is the entrepôt for the San Joaquin Valley. It is supplied with natural gas and cheap oil fuel, and two electric lines bring power from the Sierras.

The county of San Joaquin in 1900 was the chief barley county in the United States and one of the ten leading wheat counties. It is still the barley county, but its wheat fields are being converted into orchards, vineyards, and gardens. It produces about 65 per cent of the potatoes grown in California. Its agricultural output for 1906 will exceed $10,000,000 in value, and its factory output has also passed the ten million mark.

STATISTICS OF SAN JOAQUIN COUNTY, 1905-6.

General Statistics.

Area, 1,365 square miles, or 873,600 acres.	
Number of farms	3,257
Number of acres assessed	881,163
Value of country real estate	$17,060,752
Of improvements thereon	$2,312,035
Of city and town lots	$5,683,216
Of improvements thereon	$5,110,425
Of personal property	$4,047,823
Total value of all property	$36,741,655
Expended on roads, last fiscal yr.	$95,764
Expended for bridges, last fiscal year	$24,810
Number of miles of public roads	1,073
Road levy per $100, 1906	40 cts.
Value of county buildings	$747,000
Irrigating ditches, cost	$140,380

General Statistics—Continued.

Railroads, steam—miles, 208½; assessed value, county	$3,428,733
Railroads, elect'c, assessed value	$120,140
Electric power plants, assessed value	$204,240
Electric power lines—miles, 69; assessed value	$46,062
Number of acres irrigated	285,000

Forest Products.

	Amount.	Value.
Fuel, wood (cords)	5,000	$20,000

Power used for mills and manufactories in county: Steam—number, 20; electrical—number, 43; gas and gasoline—number, 12.

STATISTICS OF SAN JOAQUIN COUNTY, 1905-6—Continued.

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	93,000	48,825	$1,171,800
Barley	142,901	106,996	2,189,948
Oats	34,630	8,998	214,725
Rye	8,100	3,159	69,498
Corn	2,310	1,908	53,405
Buckwheat	20	9	237
Total cereals	280,156	168,895	$3,649,613
Alfalfa hay	18,343	55,029	$440,232
Grain hay	110,243	176,409	1,577,681
Grass hay	1,421	3,942	27,594
Total hay	130,007	235,370	$2,045,507

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	11,394	2,246	13,640
Apricot	81,235	5,254	86,489
Cherry	29,121	10,677	39,798
Fig	6,203	1,300	7,503
Lemon	1,525	236	1,761
Nectarine	941	927	1,868
Olive	45,002	5,867	50,869
Orange	8,732	3,240	11,972
Peach	185,485	31,354	216,839
Pear	26,842	2,529	28,371
Plum	20,846	1,634	22,480
Prune	45,063	10,483	55,546
Quince	7,181	879	8,060
Almond	147,524	12,691	160,215
Chestnut	103	50	153
Pecan	99	42	141
Walnut	4,211	1,270	5,481
Other nuts	37	----	37
Total fruit trees	620,544	90,679	711,223
Raisin grapes (acres.)	10	----	10
Table grapes (acres.)	8,000	6,000	14,000
Wine grapes (acres.)	7,500	10,000	17,500
Total acres grapes	15,510	16,000	31,510
Blackberries (acres.)	156	15½	171½
Currants (acres.)	2	----	2
Gooseberries (acres.)	3	----	3
Loganberries (acres.)	47	5	52
Raspberries (acres.)	19	2	21
Strawberries (acres.)	46	7	53
Total acres berries	273	29½	302½

Wines, Brandies, Etc.

Number of wineries (4 large, 20 small), 24; number of distilleries, 4; number of breweries, 2.

	Gallons.	Value.
Wine—		
Dry	500,000	------
Sweet	1,500,000	------
Totals	2,000,000	$400,000
Beer (barrels)	1,245,000	$310,700
Brandy (gallons)	20,000	14,000
Cider (barrels)	60	300
Vinegar (barrels)	500	5,000

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	1,535,400	$1,760
Apricots	------	5,000
Asparagus	5,000,000	70,000
Blackberries	195,613	9,780
Beans	12,333,600	317,850
Beets	5,074,000	10,000
Cabbage	------	17,660
Celery	------	14,800
Cauliflower	------	12,600
Corn	------	14,532
Currants	11,060	553
Cherries	873,600	26,220
Figs	1,350,000	13,500
Gooseberries	570	48
Grapes (tons)	25,400	1,031,820
Lemons (boxes)	305	752
Loganberries	71,628	3,581
Nectarines	56,450	2,823
Onions	25,436,000	152,372
Oranges (boxes)	8,732	17,464
Olives	12,250,100	45,000
Pears	2,354,920	31,012
Peaches	13,354,920	133,540
Peas	450,000	18,225
Plums	625,381	9,374
Irish potatoes	106,200,000	1,062,000
Sweet potatoes	6,321,000	19,012
Prunes	1,500,000	30,115
Quinces	215,430	3,215
Raspberries	28,500	1,425
Strawberries	63,360	3,375
Tomatoes	------	16,432
Total value		$3,095,840

Dried—	Pounds.	Value.
Almonds	340,000	$27,200
Apricots	------	5,000
Beans	12,033,600	300,850
Chestnuts	19,560	978
Figs	80,006	2,400
Onions	23,436,000	141,050
Peaches	340,000	34,000
Peanuts	------	1,000
Prunes	600,000	24,000
Walnuts	33,688	3,368
Total value		$539,846

Canned—	Cases.	Value.
Apples	2,281	$5,930
Grapes	19,145	51,691
Pears	16,928	67,712
Peaches	44,169	152,261
Plums	9,482	25,601
Tomatoes	28,000	49,000
Asparagus	40,000	100,000
Totals	160,005	$452,195

Poultry and Eggs.

	Dozen.	Value.
Chickens	18,040	$108,240
Ducks	260	2,600
Geese	204	2,448
Turkeys	1,039	15,585
Eggs	1,803,925	360,785
Total value		$489,658

STATISTICS OF SAN JOAQUIN COUNTY, 1905-6—Continued.

Dairy Industry.

	No.	Production.	Value.
Creameries (employés, 35)	3	------	------
Butter (pounds)		1,935,000	$575,300
Cream		------	200,000

Livestock Industry.

	Number.	Value.
Cattle—Beef	5,340	$160,200
Stock	22,330	379,600
Dairy Cows—Graded	15,886	635,440
Holsteins	170	34,000
Calves	9,842	68,894
Swine	31,540	63,080
Horses—		
Standard-bred	12,206	1,525,750
Common	5,340	320,400
Colts	4,010	42,000
Mules	5,415	812,250
Sheep—Common	51,416	102,832
Common Goats	392	784
Total stock all kinds	163,889	$4,145,230
Wool (pounds)	152,098	$25,350

Miscellaneous Products.

	Pounds.	Value.
Bees (hives)—number, 2,304	------	$4,608
Beeswax	2,447	------
Chicory (tons)	4,500	45,000
Flax (tons)	800	8,000
Flowers and plants (acres)	5	4,516
Honey	48,903	2,445
Flax seed	180,000	3,300
Grass seed	1,800	150

Productions Shipped Out of State.

	Amount.
Barley	75,000 tons
Wheat	5,000 tons
Almonds	340,000 lbs.
Apples, canned	2,281 cases
Apricots, dried	5,000 lbs.
Cherries, fresh	25,000 boxes
Figs, fresh	8,006 lbs.
Grapes, fresh	31,578,000 lbs.
Grapes, canned	19,143 cases
Peaches, fresh	183,850 boxes
Peaches, dried	340,000 lbs.
Peaches, canned	44,169 cases
Pears, fresh	4,371 boxes
Pears, canned	16,928 cases
Prunes, dried	600,000 lbs.
Walnuts	33,688 lbs.
Asparagus, canned	40,000 cases
Beans, dried	12,033,600 lbs.
Beeswax	2,447 lbs.
Chicory	2,400,000 lbs.
Onions, dried	23,436,000 lbs.
Irish potatoes	900,000 sacks
Tomatoes, canned	28,000 cases
Hides	12,480
Horses	1,000
Mules	3,000
Wool	136,000 lbs.
Brandy	20,000 gals.
Wine, sweet	1,500,000 gals.

Productions Shipped Out of State—Cont'd.

	Amount.
Wine, table	500,000 gals.
Machinery, wooden ware, leather, and other products, to the value of	$2,000,000

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value of Product.
Bookbinderies	4	125	------	$246,400
Art goods (pcs.)	2	8	4,750	11,500
Awnings, etc.	1	12	10,000	25,000
Bags (thousand)	1	10	2,482	120,000
Brick (thousand)	3	190	31,500	282,500
Bakeries (lbs.)	7	62	2,331,000	189,468
Boats	4	44	------	54,500
Carriages and wagons	6	61	1,558	144,000
Boilers	1	10	19	12,000
Insec'cide (tons)	7	--	20	30,000
Cigars	3	16	490,000	19,000
Clothing (suits)	13	37	2,072	79,188
Gas engines	1	95	400	250,000
Conf'tion'y (lbs.)	5	21	128,000	44,500
Wire fencing (miles)	1	30	360	50,000
Window glass (boxes)	1	60	60,000	375,000
Gloves (dozen pairs)	2	55	13,900	65,000
Flouring mills (barrels)	4	140	900,000	3,208,894
Foundries and iron works	2	86	------	152,000
Furniture	2	6	4,600	12,400
Jewelry	1	5	------	12,000
Leather goods	3	18	------	58,000
Ice (tons)	1	7	7,145	21,350
Machinery (tons)	5	400	------	1,525,000
Structural iron (tons)	2	10	1,000	48,000
Ladders	1	6	2,750	7,000
Macaroni	2	9	------	40,000
Meat products	8	50		
Hides		--	62,400	81,120
Meat packed (tons)		--	106	31,200
Tallow (bbls.)		--	3,120	24,968
Olive oil (gals.)	3	13	6,000	10,500
Mealfalfa	1	7	------	62,000
Medicines	3	13	------	37,000
Mineral water (cases)	1	14	6,000	12,000
Pickled olives	3	7	------	35,000
Wire screens	1	3	6,000	4,000
Planing mills	10	124	------	419,650
Potteries	1	--	------	------
Paints and oils (gallons)	3	6	30,000	35,000
Plows	2	56	------	170,000
Soap	1	9	------	30,000
Saratoga chips (pounds)	1	3	10,080	2,700
Scrapers	1	8	------	9,000
Marble	3	17	------	48,000
Soda water (cas.)	1	4	1,800	5,500
Tools	1	5	----	7,200
Tanks	1	3	70	2,000
Tanneries (sides)	1	70	65,000	400,000
Windmills	1	15	------	60,000
Woolen mills	1	140	------	175,500

SANTA BARBARA COUNTY.

Santa Barbara County lies in the angle formed by the eastward trend of the coast from Point Concepcion. Parallel with the southern coast, and distant from 2 to 5 miles, is the rugged range of the Santa Ynez Mountains, from 3,000 to 4,000 feet in altitude. The eastern part north of this range is occupied by the San Rafael Mountains, forming one of the Government forest reserves. The western part north of the Santa Ynez is broken into several valleys, separated by ranges of hills. That portion lying south of the Santa Ynez range and along the channel is the Santa Barbara Valley. The channel islands of San Miguel, Santa Rosa, Santa Cruz, and Anacapa are also included in the county.

Traversed by mountains, there must be waste land, but there is a total of 1,088,000 acres available for practical uses.

Santa Barbara Valley lies between the Santa Ynez Mountains and the sea. It has a world-wide celebrity for fertility of soil and healthfulness of climate.

Santa Ynez Valley, between the Santa Ynez and San Rafael ranges, comprises about 120,000 acres of excellent arable land, mostly rolling. Santa Ynez River runs the whole length of the valley, which is also watered by numerous creeks. The climate differs from that of Santa Barbara, being warmer in summer and cooler in winter.

Los Alamos Valley comprises about 40,000 acres of rich agricultural land, and as much more of excellent grazing land in the hills that are tributary.

Santa Maria Valley, the largest and northernmost, lies along the river of that name. This valley, including its upper extension, the Sisquoc, is 30 miles from the foothills to the sea. Many tributary cañons break into it through the hills, mostly small, but containing rich, protected, and generally well-watered land, adapted to all kinds of deciduous and citrus fruits. The beet-sugar industry is now assuming large importance in this valley.

The oil development about Santa Maria is attracting much attention. Many wells have been drilled, and the oil is found at a great depth, showing its permanent and inexhaustible character. The wells are from 2,000 to 3,000 feet deep, and in some instances the stratum of oil sand is 1,000 feet thick. Several gushers have been struck. The product is of good quality, running from 22 to 32 degrees gravity.

Lompoc is the center of a fertile farming and dairying section. It is on a branch of the Southern Pacific, 9 miles from the main line at the ocean, and is an up-to-date town. The section tributary is well adapted to dairying, and the people are justly proud of their creamery, the product of which is the most popular butter made in this section of the State. Lompoc seems the natural home of the apple, and its exhibit took the first prize at the great fair at New Orleans, and at Chicago was awarded a diploma for excellence. Another production of which

Lompoc has a monopoly for the United States is English mustard, which is grown on a large scale.

The arable soils of the county are mostly alluvium and adobe. The alluvial soil is generally deep and rich, and will grow all kinds of field crops, such as beans, potatoes, corn, vegetables, strawberries, and all other varieties of small fruits. In addition to the fruits usually grown in the Eastern States, this soil will produce prunes, figs, olives, peanuts, English walnuts, grapes, plums, lemons, limes, oranges, loquats, guavas, persimmons, cherimoyers, dates, bananas, and other semi-tropical fruits. In fact, nearly every tree, shrub or plant that grows in the world can be grown out of doors in the southern part of the county. The adobe soil is rich, but more difficult to work. It produces large crops of oats, wheat, barley, flax, and mustard, and affords the richest of pasturage. The principal crops are hay, barley, wheat, English mustard, apples, olives, lemons, walnuts, beans, and sugar-beets. The principal mineral productions are asphaltum and petroleum. A large portion of the county, especially that of a hilly or broken character, is devoted to stock-raising.

The decided improvement in the industrial and commercial conditions in the county, which began in 1901, continues unabated; every line of effort shows improvement. Not only has the wonderful oil development made the northern part most prosperous, but Santa Barbara City and the contiguous valleys are going ahead at a satisfactory rate.

STATISTICS OF SANTA BARBARA COUNTY, 1905-6.

General Statistics.

Area, 2,630 square miles, or 1,683,200 acres.	
Number of acres assessed	1,068,953
Value of country real estate	$8,095,045
Of improvements thereon	$1,126,825
Of city and town lots	$3,760,960
Of improvements thereon	$3,072,895
Of personal property	$2,556,120
Total value of all property	$18,611,845
Expended on roads, last fiscal yr.	$82,820
Expended for bridges, last fiscal year	$8,000
Number of miles of public roads	800
Road levy per $100, 1906	40 cts.
Value of county buildings	$175,000
Railroads, steam—miles, 158.69; assessed value	$1,916,395
Railroads, elect'c—assessed value	$19,000
Electric power plants—4; assessed value	$54,600
Number of acres irrigated	12,000

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	12,000	6,500	$156,000
Barley	50,000	28,000	550,000
Oats	15,000	4,500	90,000
Corn	3,500	1,750	42,000
Total cereals	70,500	39,750	$838,000
Alfalfa hay	640	1,920	$19,200
Grain hay	32,000	64,000	528,000
Total hay	32,640	65,920	$547,200

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	12,220	11,000	23,220
Apricot	8,000	5,000	13,000
Cherry	250	100	350
Fig	2,000	500	2,500
Lemon	84,120	11,000	95,120
Nectarine	1,200	200	1,400
Olive	21,370	8,000	29,370
Orange	3,200	1,800	5,000
Peach	5,300	1,200	6,500
Pear	18,000	2,500	20,500
Plum	2,000	400	2,400
Prune	1,800	500	2,300
Quince	2,000	300	2,300
Other kinds	5,000	400	5,400
Almond	3,000	------	3,000
Walnut	60,000	55,000	115,000
Total fruit trees	229,460	97,900	327,360
Table grapes (ac's)	250	------	250
Blackberries (acres.)	100	------	100
Loganberries (acres.)	10	------	10
Strawberries (acres.)	250	------	250
Total acres berries	360	------	360

Fish Industry.

	Pounds.	Value.
Various kinds	1,095,000	$43,800
Crawfish	900,000	45,000
Totals	1,995,000	$88,800

STATISTICS OF SANTA BARBARA COUNTY, 1905-6—Continued.

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	617,500	$20,000
Apricots	4,000,000	40,000
Blackberries	33,600	1,860
Beets (tons)	52,500	262,500
Grapes (boxes)	500	1,250
Grape-fruit (boxes)	400	1,100
Lemons (boxes)	124,800	245,000
Oranges (boxes)	1,000	2,500
Persimmons	60,000	3,200
Strawberries	400,000	20,000
Dried—	Pounds.	Value.
Beans	5,375,000	$161,250
Corn	1,400,000	16,800
Walnuts	3,000,000	300,000

Livestock Industry.

	Number.	Value.
Cattle—Beef	18,760	$750,400
Stock	37,200	744,000
Dairy Cows—Graded	11,340	340,200
Calves	6,000	48,000
Swine	7,800	78,000
Horses—		
Thoroughbred	40	8,000
Standard-bred	40	8,000
Common	10,000	400,000
Colts	1,000	20,000
Mules	2,000	150,000
Sheep—Common	35,000	110,000
Lambs	10,000	10,000
Total stock all kinds	149,180	$2,666,600
Wool (pounds)	230,000	------

Dairy Industry.

	No.	Production.	Value.
Creameries	7	------	------
Skimming stations	12	------	------
Butter (pounds)		260,000	$65,000
Cheese (pounds)		153,300	32,000
Cream (cans)		30,000	100,000

Poultry and Eggs.

	Dozen.	Value.
Chickens	6,000	$30,000
Ducks	300	1,500
Geese	90	900
Turkeys	1,200	10,000
Eggs	150,000	30,000
Total value		$72,400

Forest Products.

	Amount.	Value.
Fuel, wood (cords)	1,400	$14,000
Piles	1,000	10,000
Total value		$24,000

Miscellaneous Products.

	Pounds.	Value.
Bees (hives)—No., 3,000	------	$6,000
Flowers and plants (acres)	50	20,000
Honey	150,000	9,000

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value. of Product.
Bookbinderies	1	6	------	$4,000
Brick		--	300,000	3,000
Cigars	8	--	------	18,250
Flouring mills	1	3	------	------
Sugar, beet	1	--	------	------

Productions Shipped Out of State.

Barley	6,000 tons
Corn	200 tons
Apricots, dried	20,000 lbs.
Grape-fruit	400 boxes
Lemons	124,800 boxes
Oranges	1,000 boxes
Walnuts	3,000,000 lbs.
Beans, dried	2,500,000 lbs.
Persimmons	5,400 boxes

SANTA CLARA COUNTY.

Santa Clara County is situated on the south arm of San Francisco Bay, and is separated from the Pacific Ocean by one tier of counties. The county seat is San José, and is distant 50 miles from San Francisco. The county is 47 miles wide from north to south, and through the center runs the favored Santa Clara Valley with an average width of 15 miles. The country from the valley slopes upward through rolling hills to the summit of the Mount Diablo range of mountains on the east, and to the summit of the Santa Cruz Mountains on the west. Its peculiar location with reference to prevailing winds and ocean currents has a marked effect on the climate, rendering it pleasantly cool in summer and not too cold in winter. The average winter temperature is about 40° and in summer 70°. It is preëminently the horticultural county of California. The statistics accompanying this report show the variety and quantity of its products.

Its roads are excellent and make all points easily accessible. More than 300 miles of these roads are sprinkled during the summer months. Three lines of railroads connect it with the outside world. Its population is 70,000, San José, the county seat, has a population of 30,000. Many flourishing towns and valleys are within its borders.

Educational interests are represented by the Leland Stanford Junior University, the Santa Clara College, the University of the Pacific, the College of Notre Dame, and the State Normal School, together with numerous private seminaries and institutions for special educational work. In the public school system there are 8 high schools and 104 grammar and primary schools. The annual expenditure for public schools is $311,500. This is in addition to the municipal expenditures by cities and towns for this purpose. The value of school property is $910,832.

The valley is drained by a number of streams. In summer their watercourses greatly diminish and the smaller ones wholly disappear. Having their sources in the surrounding hills and sinking as they approach the valley, they augment the subterranean supply of the artesian wells. These are all over the valley, usually from 60 to 100 feet in depth, though some find a larger and more permanent supply at a much greater depth.

The extent and value of agricultural, horticultural, and industrial interests can be gathered from the accompanying statistics.

STATISTICS OF SANTA CLARA COUNTY, 1905-6.

General Statistics.	
Area, 1,355 square miles, or 867,200 acres.	
Number of farms	23,456
Number of acres assessed	727,905
Value of country real estate	$21,726,465
Of improvements thereon	$7,386,625
Of city and town lots	$13,060,810
Of improvements thereon	$8,354,995
Of personal property	$4,655,880
Total value of all property	$57,479,365
Expended on roads, last fiscal yr.	$158,578
Expended for bridges, last fiscal year	$13,350

General Statistics—Continued.	
Number of miles of public roads	962
Road levy per $100, 1906	40 cts.
Value of county buildings	$958,050
Irrigating ditches, cost	$15,210
Railroads, steam, assessed value	$1,788,060
Railroads, electric, assessed value	$421,190
Electric power plants, assessed value	$200 600
Electric power lines, assessed value	$82,250
Number of acres irrigated	125,000

STATISTICS OF SANTA CLARA COUNTY, 1905-6—Continued.

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	530	250	$6,500
Barley	15,200	12,000	253,200
Oats	530	280	7,860
Corn	80	120	3,500
Total cereals	16,340	12,650	$271,060
Grain hay	8,500	13,000	$130,000

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	17,400	37,000	54,400
Apricot	531,020	10,300	541,320
Cherry	128,000	22,500	150,500
Fig	1,400	640	2,040
Lemon	415	600	1,015
Nectarine	820	500	1,320
Olive	225,000	4,970	229,970
Orange	977	825	1,802
Peach	584,000	40,050	624,050
Pear	124,175	16,040	140,215
Plum	270,000	20,500	290,500
Prune	4,035,400	392,970	4,428,370
Quince	2,470	290	2,760
Almond	16,120	4,700	20,820
Walnut	10,030	2,840	12,870
Total fruit trees	5,947,227	554,725	6,501,952
Table grapes (acres.)	213	250	463
Wine grapes (acres.)	2,550	3,040	5,590
Total acres grapes	2,763	3,290	6,053

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	350,000	$58,000
Apricots	7,500,000	187,500
Asparagus	1,230,000	41,500
Beans	160,000	4,000
Beets	200,000	1,000
Cabbage	300,000	2,000
Celery	100,000	3,000
Cauliflower	120,000	3,600
Corn	1,000,000	10,000
Cherries	1,750,000	105,000
Figs	140,000	4,825
Grapes, table	1,275,000	60,250
Lemons (boxes)	1,200	960
Loganberries	75,000	2,250
Nectarines	3,500	350
Onions	5,000,000	37,500
Oranges (boxes)	2,500	1,250
Olives	475,000	14,950
Pears	8,000,000	120,000
Peaches	25,000,000	225,000
Peas	500,000	10,000
Plums	300,000	7,000
Irish potatoes	6,000,000	61,200
Prunes	225,000,000	2,250,000
Quinces	175,000	1,750
Raspberries	150,000	9,000
Strawberries	200,000	10,000
Tomatoes	10,000,000	50,000
Total value		$3,281,000

Fruit, Vegetables, Etc.—Continued.

Dried—	Pounds.	Value.
Almonds	200,000	$8,000
Apricots	600,000	48,000
Beans	640,000	16,000
Onions	1,260,000	17,650
Peaches	20,000,000	170,000
Prunes	100,000,000	3,250,000
Walnuts	450,000	16,250
Total value		$3,525,900

Canned—	Cases.	Value.
Apples	30,000	$105,000
Apricots	140,000	420,000
Cherries	30,000	120,000
Grapes	20,000	50,000
Pears	200,000	600,000
Peaches	250,000	750,000
Peas	25,000	87,500
Plums	60,000	90,000
Tomatoes	225,000	93,750
Total value		$2,216,250

Wines, Brandies, Etc.

Number of wineries, 50; number of distilleries, 11; number of breweries, 6.

	Gallons.	Value.
Wine, dry	1,000,000	$250,000
Wine, sweet	28,000	28,000
Champagne (bottles)	280,000	280,000
Total value		$558,000
Beer (barrels)	107,000	$749,000
Brandy	27,000	40,500
Alcohol	1,600,000	2,080,000

Livestock Industry.

	Number.	Value.
Cattle—Beef	2,300	$82,000
Stock	20,000	400,000
Thoroughbred	403	20,150
Dairy Cows—Graded	1,830	73,500
Herefords	73	3,650
Holsteins	79	5,050
Jersey	48	2,400
Shorthorns	203	10,150
Calves	5,490	43,020
Swine	5,000	15,000
Horses—Thoroughbred	115	28,750
Standard-bred	250	37,500
Common	12,800	448,000
Colts	2,250	33,750
Mules	160	3,200
Sheep—Common	1,600	4,800
Lambs	300	600
Angora Goats	125	625
Common Goats	400	400
Total stock all kinds	53,023	$1,201,445

Dairy Industry.

	No.	Production.	Value.
Creameries	5	------	------
Skimming stations	60	------	------
Butter (pounds)		200,000	$40,000
Cheese (pounds)		875,000	87,500
Cream (gallons)		27,000	40,500

STATISTICS OF SANTA CLARA COUNTY, 1905-6—Continued.

Poultry and Eggs.

	Dozen.	Value.
Chickens	22,000	$66,000
Ducks	2,600	10,400
Geese	250	3,000
Turkeys	250	4,500
Eggs	82,000	18,400
Total value		$102,300

Forest Products.

	Amount.	Value.
Area of timber lands (acres.)	60,000	.....
Oak (acres.)	50,000	$500,000
Redwood (acres.)	10,000	30,000
Fuel, wood (cords)	5,000	25,000
Sash and door factories (number)	6	85,000
Shingles (thousand)	4,000	8,000
Total value		$648,000

Power used for mills and manufactories in county: Steam, 207; electrical, 63; water, 2.

Miscellaneous Products.

	Pounds.	Value.
Flowers and plants (acres)	122	$76,000
Garden seed	3,360,000	680,000
Sugar beets (tons)	41,000	123,000

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value of Product.
Bookbinderies	2	53	.....	$70,000
Wood boxes (ft.)	3	38	6,250,000	.....
Brick (thousand)	4	180	40,000	360,000
Brooms (dozen)	1	1	792	3,160

Manufactories—Continued.

	No.	No. of Employés.	Quantity Produced.	Value of Product.
Carriages and wagons	13	112	.....	$133,000
Cigars (thous'd)	9	54	1,552	57,820
Coffee, spices, etc.	2	11	.....	133,250
Confectionery	15	31	.....	110,630
Cooper-shops	3	20	.....	38,000
Foundries and iron works	12	101	.....	346,300
Furniture	5	13	.....	15,090
Leather goods	17	23	.....	74,250
Meat products —				
Slaughtering stations	21	79	.....	125,000
Hides (pounds)	..	..	750,000	82,500
Lard (pounds)	..	..	32,000	3,200
Tallow	..	69	.....	1,449
Olive oil (gals.)	..	..	15,000	45,000
Pickled olives (gallons)	..	..	39,700	23,820
Planing mills	11	750	.....	1,500,000
Potteries	1	16	.....	30,000
Soap (pounds)	1	2	58,000	1,640
Artificial stone (cu. ft.)	3	25	382,000	120,000
Granite and marble	6	62	.....	293,000
Tanneries	2	130	.....	398,500
Iron	6	80	.....	179,560
Wood turning and carving	1	1	.....	2,000
Woolen mills	1	103	.....	225,000
Ice (tons)	2	32	34,825	208,950
Quicksilver (flasks)	2	..	36,000	12,600
Petroleum (13 barrels)	1	13	9,000	4,500
Other manufactories	66	524	.....	4,581,138

SANTA CRUZ COUNTY.

Santa Cruz County fronts its entire length on the Pacific Ocean. It lies midway between Oregon and Lower California, and is in the heart of Central California. It is separated from San Mateo and Santa Clara counties by the Santa Cruz Mountains, and from Monterey by the Pajaro River. It is one of the smallest counties, and comprises a narrow strip of mountainous land about 40 miles long and 18 broad, forming a vast amphitheatre, and sloping from the summits of the Santa Cruz range, whose highest elevation, Loma Prieta, is 4,000 feet, southward and westward to the bay of Monterey.

The curving line of shore and the corresponding curve of the mountain line inclose an irregular, crescent-shaped tract of country, with an average width of 20 miles, which for grandeur, beauty, and variety of scenery equals any expanse of similar size in the world. The sides of the mountains are closely set with forests of pine, redwood, madrone, and other trees, the redwoods having, in many cases, attained gigantic growth. A number of streams rise in these hills, and bring down the rich alluvial loam into the valleys, which, in their normal condition, teem with native grasses and flowers, and when cultivated yield phenomenal results. These streams are, agriculturally as well as topographically, an important feature, watering as they do every section of land. Besides these, natural springs are innumerable. Nearing the coast, there are many interesting topographical features. The leagues of wide, high, wind-swept grassy plateaus which form remarkable grazing and dairy lands; the succession of chalk terraces; the broad amphitheatrical valley of the Pajaro; the salt lagunas, picturesque in configuration and surrounded by park-like groves of live oaks; the high sandstone cliffs along the shore; the magnificent ocean drives—all are materials for pleasant investigation.

Along the coast line, a series of raised benches form a strip of elevated land. This widens to the south of the city of Santa Cruz, and affords a large area of fruitful soil, which has been brought into a high state of cultivation. From Santa Cruz City south the soil consists of a light loam, abounding in lime, potash, and phosphoric acid. In the Pajaro Valley there is a great variety, from the rich sedimentary alluvial wash to the light sandy soil of the foothills. In the lower part of the valley a clayey loam predominates. This is followed by a heavy adobe higher up, and then the dark, reddish loam of the plains. The latter is the favorite with fruit-growers, and it is here that flourish the best orchards.

The average annual rainfall, taken from a record of thirty-two consecutive years, is 25.26 inches, showing that this is a well-watered district.

The charm of Santa Cruz is her infinite variety. In lumber products she ranks third in the State. Her butter, cheese, and cream might well win her a place in the dairy districts. Hay, grain, potatoes, and the whole range of cereals and vegetables give enormous yields, and while she does not claim to wear the citrus belt, yet oranges are raised

for home consumption, and the cultivation of the lemon is a profitable business, since the immunity from frosts and the equable seasons favor its arriving at fine maturity. But her deciduous fruits, large and small, her table and wine grapes, her fine wines, are winning renown. From the summit of the range, more than 2,000 feet above the sea, down to the wide and fruitful valleys along the coast, grow and flourish delicious fruits. Prunes, pears, apricots, lemons, peaches, cherries, Japanese and native plums, figs, walnuts, persimmons, olives, and nectarines thrive, but the crop of the largest profit is that of apples. The quality and size are astonishing, and the yield as much so. From Bellflowers in September to Newtown Pippins in December the supply is steady. From two depots, in a late season, there were shipped to Eastern points, exclusive of other sales, 420,000 boxes of apples, weighing 21,000,000 pounds. The market for apples extends to England and the Continent, Germany being a large buyer. The especial home of the apple, as well as of the strawberry, is the fertile valley of the Pajaro River, and the flavor and color of the foothill apples are renowned.

Of the small fruits, the strawberry is most widely grown and furnishes a practically continuous crop. Raspberries, blackberries, Japanese wineberries, and the loganberry, which originated in Santa Cruz, yield unfailing crops. The loganberry is a cross between the wild blackberry and the Antwerp raspberry, and fruits in two varieties, red and black. The berry is large and luscious, and is grown widely in the Eastern-Southern States, as well as in California.

The wines of this county are winning the place they deserve, and the product of our vineyards is shipped to the heart of the wine countries of Europe.

The sugar-beet industry is profitable. A large acreage in the southern part of the county is devoted to the growth of the beets.

Potatoes yield phenomenally in the rich bottom lands; asparagus is grown for outside markets; hops and beans are each good enough in results for farmers to give them special attention.

Market gardening is profitable, and many comparatively small industries are making a good living for those who follow them. Among these are cucumber-growing for San Francisco and Eastern cities; seeds, bulbs, and cut flowers for metropolitan markets.

Dairying is a flourishing and profitable interest, and the fifty thousand and more acres of grazing lands have for years supported herds of well-selected stock. The grasses are rich, and the county's products of cream, milk, butter, and cheese have a good repute at home and abroad. A typical dairy and creamery farm lies just north of the city of Santa Cruz.

The poultry interest needs fostering all over California. While Santa Cruz produces and ships many eggs, the business might easily be increased many hundred per cent, especially as not enough chickens and turkeys are raised to supply the home market.

The deep-sea fisheries are important factors, and here again is room for indefinite expansion. The waters of the bay teem with food fish, the pools and rocks along the shore support quantities of shell-fish, and the streams that come down to the ocean and bay are the home of the mountain trout.

Many industries have developed to the profit-producing point, and the general air of thrift and prosperity is satisfactory. Redwood lumber

is durable, not inflammable, and capable of receiving a rich finish for interior and cabinet work. The output has been large for many years, but great tracts of forest remain, and the redwood is rapidly reproductive, giving promise that the supply shall be continuous. Many of the trees are giants of ancient growth, and it is not uncommon to see 35,000 feet of clear lumber cut from a single tree. The by-products of shakes, shingles, railroad ties, piles, telegraph poles, fruit-box shooks, pickets, posts, etc., are manufactured in large quantities. Eight varieties of oak grow, among them the chestnut oak, which supplies tanbark for the making of superior leather. The manufacture of powder, besides requiring redwood and oak for fuel, utilizes willow, alder, and madrone. Redwood, laurel, and madrone are all practically used as cabinet woods, and this industry is susceptible of an indefinite development, so numerous and varied are these products. Naturally, wood is the fuel in general use, and it is of the best quality and cheaper in Santa Cruz than in any Central California county. "Big Tree Grove" is but five miles from town, on the line of the railway in the cañon of the San Lorenzo. This is an ancient grove of giants—not the *Sequoia gigantea* of the Sierras, but the *Sequoia sempervirens*. It covers twenty acres, and numbers scores of trees from 10 to 20 feet in diameter, and a dozen or more which exceed that diameter and reach a height of 300 feet.

In the mountains near the coast there were discovered years ago deposits unique and strange in substance, which under the name of bituminous rock have proved of untold value as a natural pavement material. It has been used on the streets and sidewalks of Santa Cruz and other places for years, and when laid on a proper foundation is durable, clean, and elastic. It is a natural combination of bitumen, sand, and crude petroleum. It is shipped to all nearby cities, and goes as well to Salt Lake, Tacoma, Seattle, Phœnix, and to Honolulu.

Similar conditions exist regarding the vast deposits of high-grade lime rock throughout the mountains. Five kilns are in active operation, and many cargoes per month are shipped to distant points. The employés and their families, like those of the lumber mills, constitute populous little settlements.

Santa Cruz, Watsonville, Soquel, Aptos, Felton, Glenwood, and Boulder Creek are the principal towns.

STATISTICS OF SANTA CRUZ COUNTY, 1905-6.

General Statistics.

Area, 500 square miles, or 320,000 acres.	
Number of farms	1,765
Number of acres assessed	258,926
Value of country real estate	$4,117,385
Of improvements thereon	$1,647,605
Of city and town lots	$3,096,920
Of improvements thereon	$2,402,510
Of personal property	$1,644,715
Total value of all property	$12,909,175
Expended on roads, last fiscal yr.	$70,000
Number of miles of public roads	458
Road levy per $100, 1906; inside, $1.75; outside, $2.20.	
Value of county buildings	$162,500
Railroads, steam—miles, 72.93; assessed value	$915,629
Railroads, electric — assessed value	$39,985
Electric power plants—2; assessed value	$45,320
Number of acres irrigated	1,260

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	317	240	$7,220
Barley	2,900	5,670	113,400
Oats	2,700	3,221	64,420
Corn	325	499	13,473
Total cereals.	6,242	9,630	$198,493
Alfalfa hay	225	1,188	$9,170
Grain hay	7,420	17,035	170,350
Total hay	7,645	18,223	$179,520

Dairy Industry.

	Production.	Value.
Butter (pounds)	465,600	$116,400
Cheese (pounds)	301,500	31,500
Cream (gallons)	4,500	9,000

Dairies, 16.

STATISTICS OF SANTA CRUZ COUNTY, 1905-6—Continued.

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	317,794	306,476	624,270
Apricot	34,025	31,063	65,088
Cherry	20,544	6,538	27,082
Fig	206	156	362
Olive	541	145	686
Orange	133	79	212
Peach	14,361	987	15,248
Pear	15,253	1,754	17,007
Prune (French)	120,824	6,722	127,546
Other kinds	19,367	2,830	22,197
Quince	12	----	12
Lemons	76	83	159
Almond	347	77	424
Walnut	1,896	5,969	7,865
Total fruit trees	545,379	362,879	908,158
Table grapes (acres.)	480	514	994
Wine grapes (acres.)	745	939	1,684
Total acres grapes	1,225	1,453	2,679
Blackberries (acres.)	105	----	105
Loganberries (acres.)	211	----	211
Raspberries (acres.)	23	----	23
Strawberries (acres.)	400	----	400
Total acres berries	739	----	739

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	121,761,390	$975,800
Apricots	1,568,750	28,180
Asparagus	50,000	3,600
Blackberries	1,420,000	49,000
Beans	2,840,000	55,000
Beets	56,000,000	86,000
Grapes	7,000,000	140,750
Onions	1,875,000	26,000
Peaches	1,551,800	26,380
Irish potatoes	14,214,500	184,145
Raspberries	174,420	14,000
Strawberries	7,000,000	249,160
Totals	211,455,860	$1,838,015

Dried—	Pounds.	Value.
Apples	6,327,704	$433,494
Apricots	1,575,400	140,000
Prunes	920,700	36,828
Totals	8,823,804	$610,322

Canned—	Cases.	Value.
Apples	11,000	$56,000
Blackberries (gals.)	7,156	----

Poultry and Eggs.

	Dozen.	Value.
Chickens	3,230	$16,150
Ducks	140	70
Turkeys	180	360
Eggs	310,100	77,525
Total value		$94,105

Wines, Brandies, Etc.

Number of wineries, 12; number of breweries, 3.

	Gallons.	Value.
Claret	364,980	$58,508
Riesling	48,945	7,945
Totals	413,925	$66,453
Beer (barrels)	9,400	$42,360
Cider (gals.)	51,250	7,680
Vinegar (gals.)	68,600	5,400
Beer (bottled)	28,500	10,000
Mineral waters	55,592	33,350

Fish Industry.

	Pounds.	Value.
Various kinds	2,652,064	$79,560

Livestock Industry.

	Number.	Value.
Cattle—Beef	713	$11,426
Stock	100	1,800
Jacks	4	70
Mules	120	4,620
Calves	312	1,690
Swine	1,345	7,025
Horses—		
Thoroughbred	14	2,800
Common	1,516	41,385
Colts	266	5,060
Sheep—		
Imported or fine	21	50
Graded	150	3,601
Common	1,668	3,165
Goats—Angora	725	1,450
Common	325	405
Total stock all kinds	7,179	$81,306

Forest Products.

	Amount.	Value.
Sawmills (number)	9	----
Fuel wood (cords)	79,991	$375,161
Lumber (feet)	38,400,000	783,567
Grape stakes	560,000	8,200
Pickets (pieces)	300,000	9,500
Posts (pieces)	602,000	38,260
Tan bark (cords)	7,200	103,236
Shakes	1,225,000	13,475
Shingles	11,063,000	16,048
Total value		$607,447

Manufactories.

	No.	No. of Employés	Quantity Produced.	Value of Product.
Berry drawers	----	----	500,000	$10,000
Wood boxes	----	----	550,000	32,800
Lime (barrels)	3	260	30,000	354,091
Paper (pounds)	1	20	1,200,000	360,000
Packing-houses (boxes)	37	755	1,890,000	975,800
Planing mills	3	105	----	465,000
Powder mills	1	201	279,840	313,181
Powder (kegs)	----	---	1,276,196	437,524
Soap (pounds)	2	4	200,000	7,080
Tanneries (lbs.)	1	50	1,250,000	300,000
Wood turning and carving	1	12	----	11,000

STATISTICS OF SANTA CRUZ COUNTY, 1905-6—Continued.

Productions Shipped Out of State.

	Amount.
Apples, fresh	1,890,000 boxes
Apples, dried	6,327,704 lbs.
Apples, canned	11,000 cases
Apricots, fresh	1,568,750 lbs.
Apricots, dried	1,575,400 lbs.
Blackberries, fresh	1,420,000 lbs.
Blackberries, canned	7,156 gals.
Figs, dried	7,000,000 lbs.
Peaches, fresh	1,551,800 lbs.
Prunes, fresh	463,000 lbs.

Productions Shipped Out of State—Cont'd.

	Amount.
Prunes, dried	920,700 lbs.
Raspberries, fresh	174,420 lbs.
Strawberries, fresh	7,000,000 cases
Onions, dried	1,875,000 lbs.
Lime	218,084 bbls.

Miscellaneous Products.

	Pounds.	Value.
Bees (hives) No., 1500		$2,700
Hops, 120 acres	200,000	40,000

SHASTA COUNTY.

Shasta County is at the head of the Sacramento Valley. Its greatest length from east to west is 90 miles, and its greatest breadth from north to south 60 miles.

The mountains of the Sierra Nevada and Coast Range cover a large portion of the county on all sides except the south. They are rugged and lofty, rising more than 5,000 feet above the sea. On the east there are four peaks of special prominence. Lassen Peak, altitude of 10,577 feet, is timbered for two thirds of the way up; the others are bald, and usually covered with snow. Other peaks and buttes are numerous, and all indicate volcanic origin, as shown by extinct craters, cones, sulphur deposits, beds of lava, etc. Hot and boiling springs are of frequent occurrence. In the southern portion is a foothill region, half circular, forming the northern end of the Sacramento Valley proper, and embracing about 500,000 acres, the altitude of which is from 500 to 2,500 feet above sea-level. The southwestern portion of this region is a succession of rounded hills, varying in height from 50 to 200 feet, and the central and southern portion consists of table-lands, varying in altitude from 500 to 700 feet. It has many narrow valleys.

Shasta is noted for the number and beauty of its streams. First in importance is the Sacramento River, flowing through the county from north to south; all but 20 miles is through a rocky cañon. The McCloud River, bursting from Mount Shasta's side, rushes through the mountains of the north in a southerly direction and empties into Pitt River. The most beautiful stream of the northeast is Fall River. In its meanderings it is 40 miles in length, and empties into the Pitt. Besides these larger streams there are a score of tributaries, while springs abound in the foothills and mountains.

The soil of the valleys is an alluvium, a rich sedimentary deposit, largely intermixed with disintegrated rock, and in some parts with a gravel. The usual color is light red or reddish brown. It is very fertile, and excellent for plums, prunes, pears, figs, and small fruits. The mesa lands bordering the valleys are of a sandy loam, with a large percentage of clay, and carrying in many portions, especially in the higher parts, considerable gravel and bowlders. Fruit does well on these mesa lands. On the foothills is a red loam or clay, productive and adapted to berries. On the elevated plateaus of the north and northwest the soil varies from a black, sandy loam to a red loam or clay, while to the southwest the soil is generally adobe, productive of grain and rich in natural grasses.

Irrigation is unnecessary for most crops, as the rainfall is sufficient. The rainy season begins in September and extends, at intervals of two or three weeks, from that time until May. During this time the ground is thoroughly saturated with moisture, and the rainy period covers the entire growing season. At the end of the wet season grains, grasses, etc., are ready for the harvest, and fruits, grapes, etc., are beginning to ripen.

Beautiful resorts and health-giving springs abound. The high mountains are heavily timbered with sugar pine, cedar, fir, and other valuable timbers. There are some large valleys and extensive plateaus, mostly devoted to general farming, stock-raising, and wool-growing. The foothills are more or less timbered with oak and pine, and their higher portions yield all kinds of minerals and stone—gold, silver, copper, iron, platinum, quicksilver, lead, marble, sandstone, limestone, coal, onyx, etc.—affording also opportunities for lovely homes to the small farmer, fruit-grower, stock-raiser, poultryman and gardener. The climate is pleasant, not extremely hot in summer nor cold in winter. The valleys are fertile and capable of producing all things grown in the temperate or semi-tropical regions. At certain altitudes, crisp and luscious apples are produced, and the quantity and quality can not be surpassed.

Shasta orchards are a success, producing heavy crops and of the best quality. The prune, peach, pear, plum, apple, apricot, almond, fig, lemon, orange, and olive thrive. Grapes of wine, table, and raisin varieties have proven a success in the valley portions, and many gallons of wine are made and shipped to different parts of the country; so with raisins. Wheat, grass, and alfalfa are grown successfully. The markets are the best, as there is home consumption for everything produced except fruit, and hundreds of carloads in addition to the products raised here are shipped in annually, consisting mostly of grain, hay, butter, eggs, and vegetables. The home-seeker will find land adapted to grain-growing, hay-making, poultry-raising, or gardening at less prices than in the older settled portions of the State.

Stock-raising is an important factor. The mild winters in the lower altitude obviate the necessity of feeding, while the summer ranges in the mountains make it possible for the stock-raiser to keep his herd upon green feed the greater portion of the year.

The sawmills annually distribute thousands of dollars for labor. The Terry Lumber Company's mills are the largest in the county. They are connected with Bella Vista by flume, and there have planing-mills, yards and dryhouses, and a railway to the main line at Anderson. The wood camp is in the big bend of the Pitt, and has been sending thousands of cords of wood annually down the Pitt to the smelters. In the Shingletown country there are several large sawmills, and there have been graded about twenty-five miles of road for traction-engine work. Over this road, with engines, they transport their lumber to the railroad. At or near Whitmore there are also a number of sawmills. There are some large flouring mills.

The resorts are numerous and easy of access.

Redding, the county seat, is one of the most beautifully located places on the Pacific Slope, commanding a view of both the Sierra and Coast ranges, with their lofty, snow-clad peaks, and an equally beautiful view of the Sacramento south and cañon north.

The next town of importance is Keswick, at the smelters of the Iron Mountain Company, six miles from Redding.

Shasta, once the county seat, is famous the State over for its former glory.

Anderson, on the California & Oregon Railroad, 12 miles south from Redding, is the chief shipping point for the fruit industry of the county. The country surrounding the town is largely valley land, and thousands of acres of bearing orchards are tributary to it.

While Shasta's preëminence in mineral production is largely due to the development in copper, her output in the more precious metals is very large; and the production of these metals as a by-product of the copper sulphide ores will, with the extension of the industry, exceed the present output many times.

Statistics showing the "Mineral Productions" of Shasta County for the last preceding year are included herein. These items are important to the county and State, as a vast amount of revenue is derived therefrom.

The production of copper in Shasta County, although a great and growing industry, is yet in its infancy, having almost doubled in the past year.

In an agricultural way, Shasta County has, besides her vast output of grain, fruit, and stock, important possibilities yet in their experimental stage. A great many crops that can be grown at immense profit have only been tested, the large land-holdings being occupied in raising less profitable crops that admit of greater investment.

Irrigation is receiving more notice than ever before, and as our choicest lands, of which the acreage is large, lie along the numerous streams of the county, where water in abundance is easily and cheaply accessible, together with the fact that our climate is such as to admit of the successful growth of semi-tropical vegetation, this feature is destined to become an important one.

STATISTICS OF SHASTA COUNTY, 1905-6.

General Statistics.

Area, 4,050 square miles, or 2,592,000 acres	
Number of farms	1,000
Number of acres assessed	1,355,479
Value of country real estate	$7,003,980
Of improvements thereon	$1,500,260
Of city and town lots	$578,863
Of improvements thereon	$972,360
Of personal property	$1,389,112
Total value of all property	$11,444,575
Expended on roads, last fiscal yr.	$37,253
Expended for bridges, last fiscal year	$20,610
Number of miles of public roads	1,000
Road levy per $100, 1906	40 cts.
Value of county buildings	$110,000
Irrigating ditches—miles, 50; cost	$2,500
Railroads, steam—miles, 117.54; assessed value	$1,771,578
Electric power plants—2; assessed value	$212,000
Electric power lines—miles, 134⅔; assessed value	$48,100
Number of acres irrigated	3,000

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	3,000	1,500	$36,000
Barley	10,000	7,500	150,000
Oats	400	175	5,250
Total cereals	13,400	9,175	$191,250
Alfalfa hay	900	2,500	$17,500
Grain hay	------	3,000	30,000
Grass hay	------	5,000	30,000
Total hay	------	10,500	$77,500

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	15,000	1,000	16,000
Apricot	500	-------	500
Cherry	500	-------	500
Fig	800	-------	800
Lemon	250	-------	250
Olive	9,000	-------	9,000
Orange	800	-------	800
Peach	25,000	2,000	27,000
Pear	27,000	2,000	29,000
Plum	1,000	-------	1,000
Prune	70,000	-------	70,000
Other kinds	6,500	-------	6,500
Almond	3,500	-------	3,500
Walnut	250	-------	250
Total fruit trees	160,100	5,000	165,100
Raisin grapes (acres.)	5	----	5
Table grapes (acres.)	5	----	5
Wine grapes (acres.)	20	----	20
Total acres grapes	30	----	30
Blackberries (acres.)	25	----	25
Currants (acres.)	5	----	5
Loganberries (acres.)	10	----	10
Strawberries (acres.)	40	----	40
Total acres berries	80	----	80

Poultry and Eggs.

	Dozen.	Value.
Chickens	250	$1,000
Ducks	25	200
Turkeys	500	10,000
Eggs	4,500	900
Total value		$12,100

STATISTICS OF SHASTA COUNTY, 1905-6—Continued.

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	115,000	$2,500
Apricots	16,000	325
Blackberries	33,000	1,400
Cabbage	50,000	1,000
Cherries	8,000	400
Figs	80,000	800
Grape-fruit	350,000	3,500
Loganberries	5,000	200
Onions	20,000	400
Olives	85,000	4,000
Pears	4,820,000	95,000
Peaches	3,300,000	40,000
Plums	40,000	600
Irish potatoes	200,000	3,000
Sweet potatoes	10,000	300
Prunes	6,640,000	75,000
Strawberries	35,000	2,000
Tomatoes	85,000	1,300
Total value		$231,725

Dried—	Pounds.	Value.
Almonds	20,000	$2,000
Apples	8,000	250
Apricots	1,000	1,000
Beans	28,000	1,000
Figs	4,000	250
Grapes	20,000	1,000
Onions	10,000	200
Pears	600,000	50,000
Peaches	560,000	56,000
Prunes	4,200,000	110,000
Total value		$221,700

Wines, Brandies, Etc.

Shasta reports one brewery, with an output of 8,700 barrels of beer, worth $36,000.

Livestock Industry.

	Number.	Value.
Cattle—Beef	4,000	$100,000
Stock	15,000	200,000
Thoroughbred	20	2,000
Dairy Cows—Graded	60	2,400
Herefords	100	5,000
Shorthorns	25	1,250
Calves	4,000	40,000
Swine	8,000	30,000
Horses—		
Thoroughbred	2	1,500
Standard-bred	25	5,000
Common	4,000	160,000
Colts	500	16,000
Mules	300	12,000
Sheep—		
Imported or fine	500	7,000
Common	25,000	50,000
Lambs	9,000	13,000
Common Goats	14,000	28,000
Total stock all kinds	84,532	$667,150
Wool (pounds)	200,000	$15,000
Mohair (pounds)	70,000	9,000

Dairy Industry.

	Pounds.	Value.
Butter	70,000	$1,400

Forest Products.

	Amount.	Value.
Area of timber lands (acres)	350,000	
Sawmills (number)	11	$40,000
Charcoal (sacks)	20,000	
Fuel, wood (cords)	2,000	6,000
Laths (thousand)	120	300
Lumber—Cedar (ft.)	150,000	2,250
Pine (feet)	30,000,000	375,000
Posts (pieces)	12,000	1,200
Shakes (thousand)	200	1,000

Power used for mills and manufactories in county: Steam—number, 10; water—number, 1.

Miscellaneous Products.

	Pounds.	Value.
Hops	65,000	$8,000
Chrome	40,000	300
Copper	10,830,865	1,688,614
Limestone	7,200,000	3,600
Gold		684,952
Silver		167,548

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value of Product.
Brick (thousand)	2	45	3,500	$25,000
Cigars "	3	6	300	14,000
Flouring mills (barrels)	3	12	10,000	40,000
Foundries and iron works (tons)	1	15	300	25,000
Lime (barrels)	2	30	10,700	9,500
Matches	1	1	1,000	900
Hides (pounds)		--	150,000	15,000
Lard (pounds)		--	70,000	5,500
Tallow (barrels)		--	200	------
Pickled olives (gals.)			10,000	7,500
Planing mills	3	50	------	------

Productions Shipped Out of State.

	Amount.
Almonds	10,000 lbs.
Peaches, fresh	10,000 boxes
Peaches, dried	560,000 lbs.
Pears, fresh	50,000 boxes
Pears, dried	580,000 lbs.
Prunes, fresh	320,000 lbs.
Prunes, dried	4,200,000 lbs.
Hops	60,000 lbs.
Cattle	3,500
Hides	15,000
Horses	220
Swine	4,000
Wool	200,000 lbs.
Lumber	30,000 M ft.
Olives, pickled	10,000 gals.

SIERRA COUNTY.

Sierra County has an area practically all mountainous. The altitude ranges from 2,000 to 8,600 feet, the highest elevation being that of the Sierra Buttes; but the greater portion has an elevation of from 4,000 to 5,000 feet.

The main ridge of the Sierra Nevadas crosses the eastern part from south to north. Several spurs traverse the county from east to west, forming the watersheds of the four principal streams which make the drainage system of the western part. These streams consist of the Middle Yuba River on the south, the North Yuba near the center, and Cañon Creek and Slate Creek on the north; and in the eastern end the many streams that form the headwaters of the Feather and Truckee rivers. Of the peculiar topographical features are the expansive valleys and lakes lying among the loftiest peaks of the Sierras. The lakes vary from one eighth of a mile to three or four miles in length, most of them circular, and, considering their small size, remarkable for their depth.

The important body of agricultural land is Sierra Valley. It extends over the boundary line into Plumas County, and is the largest and the most elevated of the valleys of the Sierras, being 4,750 feet above sea-level. It is 30 miles in length and 10 in width. This valley is particularly adapted to stock-raising and dairy purposes, and a fine quality of timothy and alfalfa hay is raised. There are several creameries in the valley, and a superior quality of butter is made, of which almost all is shipped to the outside. Considerable beef cattle are fattened for San Francisco and other markets; besides large shipments of sheep. The soil is a deep, black loam, largely admixed with rich vegetable mold, the result of ages of forest growth.

Since 1849 the principal industry has been gold mining. One hundred and ninety millions of dollars have been taken from its rivers, gravel deposits and quartz veins.

The greater portion is practically covered with a virgin belt of soft timber. The lumber cut runs into many millions of feet. The Floriston Paper Mill Company owns timber lands, and uses a large amount of Sierra County timber.

Population, according to census of 1900, was 4,017.

Average temperature winter 47°, summer 72°, summer nights are pleasantly cool.

Annual rainfall, about 60 inches.

Character of agricultural soil: black loam, very rich.

The principal towns are: Downieville, Forest City, Sierraville, Loyalton, Sierra City.

Natural products: white, yellow, and sugar pine, fir, spruce, and cedar, livestock, fruit, berries, and garden truck.

Manufactured products: lumber, boxes, sashes, doors, etc., creamery butter.

Minerals: gold, iron, copper, asbestos, and lime.

Irrigation and power facilities are unlimited.

Transportation facilities: Boca & Loyalton Railroad, Central Pacific Railway, Nevada-California-Oregon Railway, and Hobart-Mills Railroad. Communication facilities: Sunset Telephone Company, Western Union Telegraph Company, and Sierra Valley Telegraph Company.

Educational facilities: first-class common and grammar schools.

Health resorts: Campbell's Hot Springs, Webber, Independence, and Gold lakes.

Hunting and fishing abundant—trout, mountain quail, grouse, duck, snipe, deer, and bear.

STATISTICS OF SIERRA COUNTY, 1905-6.

General Statistics.

Area, 1,000 square miles, or 640,000 acres.	
Number of farms	101
Number of acres assessed	43,804
Value of country real estate	$1,204,060
Of improvements thereon	$258,660
Of city and town lots	$55,915
Of improvements thereon	$239,630
Of personal property	$263,010
Total value of all property	$2,029,665
Expended on roads, last fiscal yr.	$7,779
Expended for bridges, last fiscal year	$1,322
Number of miles of public roads	300
Road levy per $100, 1906	50 cts.
Value of county buildings	$14,000
Irrigating ditches, miles, 6; cost	$1,270
Railroads, steam—miles, 29.48; assessed value	$198,310
Electric power plants—4; assessed value	$3,500
Number of acres irrigated	20,000

Cereal Products and Hay.

	Acres.	Tons of 2,000 pounds. Tons.	Value.
Wheat	550	298	$10,430
Barley	355	218	6,540
Oats	383	173	5,536
Rye	283	81	2,430
Total cereals	1,571	770	$24,936
Alfalfa hay	1,332	1,872	$13,104
Grain hay	848	1,015	6,598
Grass hay	13,624	17,606	114,439
Total hay	15,804	20,493	$134,141

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	4,730	190	4,920
Cherry	110	12	122
Peach	300	50	350
Pear	225	48	273
Plum	240	48	288
Quince	20	--	20
Chestnut	30	10	40
Walnut	25	20	45
Total fruit trees	5,680	378	6,058

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	100,000	$2,230
Cabbage	24,000	480
Cherries	22,000	880
Onions	6,000	120
Pears	5,000	75
Peaches	800	40
Plums	800	24
Irish potatoes	520,000	10,400
Totals	678,600	$14,249

Beer—Butter.

Sierra County reports one brewery with an output of 247 barrels of beer, worth $3,000.

Also an output of 315,000 pounds of butter, worth $63,000.

Livestock Industry.

	Number.	Value.
Cattle—Beef	3,800	$111,600
Stock	5,300	106,000
Thoroughbred	100	5,000
Dairy Cows—Graded	2,100	8,400
Calves	1,250	11,250
Swine	500	3,000
Horses—		
Standard-bred	2	1,000
Common	900	40,000
Colts	160	4,800
Mules	40	2,000
Sheep—Common	3,300	11,550
Lambs	2,000	6,000
Goats—Common	100	200
Total stock all kinds	19,552	$310,800
Wool (pounds)	25,400	$5,000
Mohair (pounds)	200	40

Poultry and Eggs.

	Dozen.	Value.
Chickens	1,300	$6,500
Turkeys	12	240
Eggs	26,000	6,500
Total value		$13,240

STATISTICS OF SIERRA COUNTY, 1905-6—Continued.

Forest Products.

	Amount.	Value.
Area of timber lands (acres.)	213,000	$650,000
Cedar (acres.)	1,000	------
Pine (acres.)	213,000	------
Sawmills (number)	12	91,000
Fuel, wood (cords)	10,000	20,000
Laths	1,000,000	2,500
Lumber—Cedar (feet)	200,000	30,000
Pine (feet)	57,000,000	684,000
Posts (pieces)	20,000	1,200
Railroad ties (pieces)	100,000	32,000
Shingles (thousand)	1,300	3,600
Total value		$1,514,300

Power used for mills and manufactories in county: Steam—number, 12; water—number, 4.

Miscellaneous.

Sierra reports one foundry with two employés and an output valued at $2,500; 2,100 hides valued at $8,400, 6,000 pounds of lard valued at $750, and 22,000 pounds of tallow valued at $880.

The county's exports are reported as 1,800 cattle, 2,100 hides, 5,000 sheep, 24,000 pounds of wool, 100,000 pounds of butter, and 46,000,000 feet of lumber.

There are four box factories in the county that employ 140 people and turn out an annual product valued at $230,000.

SISKIYOU COUNTY.

Siskiyou is one of the northern counties. Its north line joins Oregon for 80 miles. Of its area, 1,000 square miles are valley, the remainder mountainous; however, among the mountains are hundreds of upland farms and stock ranches, well wooded and watered. It contains a large area of farming, mining, desert, swamp, and timber lands. The so-called desert lands are fertile when water can be applied, and for this object the Legislature ceded to the Federal Government all the lake lands along the boundary of the county and Oregon, where hundreds of thousands of acres will soon be reclaimed, by lowering the level of the lakes, using the water for irrigating the arid districts, and draining the swamp lands. This land will be open to homestead entry, and will make homes for thousands of settlers.

The mining section comprises the west half, and produces nearly a million in gold annually. There are deposits of iron ore, marble equal to the best, and sandstone in vast quantities that, owing to the lack of lime, is regarded as the best on the coast. In Scott Valley are large deposits of limestone and granite.

It has been demonstrated that sugar-beets grow to perfection in Scott and Shasta valleys. The agricultural district lies chiefly in the central and eastern parts of the county. Timber is everywhere. There are thousands of sections that will cut from ten to twenty million feet of yellow and sugar pine, from trees that will produce logs from five to eight feet clear. Besides there is much red fir and cedar.

The Sierra Nevada and Coast Range mountains meet here, forming the head of the Sacramento Valley. The altitude ranges from 2,000 feet in the valley to 14,000 on the mountain peaks. There are localities where snow seldom falls, and there are regions of perpetual snow. Such conditions make it one of the most scenic of the counties.

Many of the waterfalls have been harnessed for electrical power. The notable one is the plant at Fall Creek, where the Siskiyou Light and Power Company has the third largest electric plant in California, and has stretched aluminum wires to all parts of the county, supplying cheap and abundant power.

The principal river is the Klamath, which drains almost the entire county, and flows into the Pacific Ocean at the border line between Humboldt and Del Norte. This stream is not navigable. It is a natural dumping-ground for the placer mines, its swift current carrying the tailings out to the ocean. Placer mining has been carried on along its watershed for more than fifty years, and yet nowhere is there any indication of the channel filling up.

The Southern Pacific Railroad passes through the county from north to south, entering at Dunsmuir, where are located its roundhouse and machine shops. Sisson is a popular summer resort, as also is the Shovel Creek hot springs and mud baths, at Beswick. Hornbrook, the

most northerly town in California, is 8 miles from the State line. It is located in a fertile valley, near the Klamath River, surrounded by mountains, which contain valuable placer and quartz mines.

Yreka, the county seat, is the principal town. The courthouse and jail are splendid buildings. Two electric plants furnish light and power. The city owns its water system, and it is equal to any in the State, the water being filtered through banks of gravel.

The electric light plants will be the means of opening a number of rich gravel mines lying along the low creeks, too deep for hydraulicking, and too wet for drifting. With plenty of cheap and convenient power, dredges are being built to work this ground.

There are large lumber mills at McCloud, with railroad from the main line at Upton. The Weed Lumber Company is another large concern. It has a railroad into the timber region. Lumbering is the principal industry, with mining and livestock a close second and third.

The mountain districts furnish splendid range nine months in the year for thousands of cattle. New gold mines are being discovered, and the old ones continue good with depth. The timber will last for a hundred years; lime, building stone, and marble quarries are being opened; railroads have been built; swamp lands have been drained, arid plains irrigated, and pasture lands have been converted into hop fields. All this, added to our present prosperity, our temperate climate and natural advantages, promises for Siskiyou County a bright future.

STATISTICS OF SISKIYOU COUNTY, 1905-6.

General Statistics.

Area, 6,048 square miles, or 3,870,720 acres.	
Number of farms	900
Number of acres assessed	875,000
Value of country real estate	$7,579,435
Of improvements thereon	$1,100,921
Of city and town lots	$256,300
Of improvements thereon	$780,130
Of personal property	$1,606,494
Total value of all property	$11,501,836
Expended on roads, last fiscal yr.	$46,711
Expended for bridges, last fiscal year	$88,873
Number of miles of public roads	1,000
Road levy per $100, 1906	35 cts.
Value of county buildings	$75,000
Irrigating ditches—miles, 350; cost	$125,000
Railroads, steam—miles, 150; assessed value	$2,733,205
Electric power plants, 5; electric power lines, 75 miles; assessed value	$50,000
Number of acres irrigated	15,000

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	130,000	43,000	$946,000
Barley	2,000	600	14,652
Oats	1,000	500	16,000
Total cereals	133,000	44,100	$976,652
Alfalfa hay	------	50,000	$350,000
Grain hay	------	4,000	32,000
Grass hay	------	15,000	105,000
Total hay		69,000	$487,000

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	12,350	1,700	14,050
Apricot	500	------	500
Cherry	800	75	875
Nectarine	100	------	100
Peach	4,000	1,000	5,000
Pear	2,500	500	3,000
Plum	3,000	600	3,600
Prune	3,000	600	3,600
Walnut	300	------	300
Total fruit trees	26,250	4,475	30,725

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	1,152,200	$23,044
Apricots	5,000	200
Beans	61,500	3,075
Beets	115,400	1,154
Cabbage	56,500	1,130
Onions	37,500	750
Pears	94,000	1,880
Peaches	81,000	1,620
Plums	72,000	720
Irish potatoes	1,600,000	24,000
Prunes	45,000	900
Strawberries	12,500	1,250
Totals	2,332,600	$59,723

Dairy Industry.

	No.	Production, Pounds.	Value.
Creameries	5		
Butter		500,000	$125,000
Cheese		25,000	3,750

STATISTICS OF SISKIYOU COUNTY, 1905-6—Continued.

Miscellaneous Products.

	Amount.	Value.
Bees (hives)—number, 2,000	------	$4,000
Honey (pounds)	100,000	10,000
Foundries and iron works (number)	2	------
Cigars	200,000	------
Hides (pounds)	150,000	------
Lard (pounds)	100,000	------

Livestock Industry.

	Number.	Value.
Cattle—Beef	6,000	$150,000
Stock	30,000	$450,000
Thoroughbred	20	2,000
Dairy Cows—Graded	3,000	------
Calves	6,000	36,000
Swine	10,000	50,000
Horses—		
Thoroughbred	6	6,000
Standard-bred	4	2,000
Common	6,000	600,000
Colts	500	5,000

Livestock Industry—Continued.

	Number.	Value.
Sheep—Common	8,000	$20,000
Lambs	1,000	1,250
Angora Goats	300	450
Total stock all kinds	70,830	$1,322,700
Wool (pounds)	50,000	------

Poultry and Eggs.

	Dozen.	Value.
Chickens	5,000	$30,000
Geese	142	1,704
Eggs	300,000	75,000
Total value		$106,704

Forest Products.

Area of timber lands (acres)	2,000,000
Sawmills (number)	36
Lumber—Pine (feet)	150,000,000

SOLANO COUNTY.

Solano County is midway between the northern and southern extremities of the State. It is not exactly square, but about 40 miles from north to south, and averages almost as much east and west.

Swamp lands border on the Sacramento River and on Suisun and San Pablo bays. A large portion of the county—about two thirds—is valley, the remainder being foothills. The slopes and smaller valleys are noted for their early production of fruit and vegetables.

The soil varies from red gravel to black sandy loam; from barren patches of alkali to rich alluvium; and all classes of soil may be found. That of the swamp and overflowed lands is largely composed of decayed vegetable matter, admixed with sedimentary deposits. In the trough of Vaca Valley the soil varies from a sandy to a clayey loam, and sometimes to adobe. Throughout the hilly land to the east and northeast of Ulattis Creek it varies from sandy to clayey, according to the character of the parent formation. Experience has proved that the heavier soils are the best for pears, and the more sandy for peaches and apricots. In wells dug in this district, the surface soil varies from 1 to 10 feet in depth, beneath which sandstone, interstratified with shale, exists to a depth of about 200 feet.

Solano ranks among the leading horticultural counties, and during the past ten years has made wonderful strides. In climate and soil Solano is eminently adapted to horticultural pursuits, and the earliness and superiority of her fruit products have given her a national reputation. In Vaca Valley fruit and vegetables ripen and find their way to market in the early season. This valley is 12 miles long and 2 wide, and owes its advantages to elevation, location, and surroundings—the encircling hills protecting it from chilling winds, and the slopes giving to it the full benefit of the spring sunshine, while the deep, rich, fertile soil gives all the required constituents for plant life. Fruit-trains leave daily during the season for the East. The earliness with which fruits ripen in the Vaca and Pleasant valleys is attested by the fact that cherries are shipped early in April, and apricots early in May, with all others proportionately. Vegetables are grown in large quantities, and find a ready sale in the San Francisco market.

The chief fruit sections are Suisun, Vacaville, and Laguna, and the principal varieties of fruits grown are apricots, peaches, pears, plums, prunes, and table grapes. A large proportion of the crop is shipped green for table use.

The livestock and dairying interests are extensive and profitable.

Poultry interests are quite large and increasing every year, and a profitable field is open to this industry.

The tule land itself is but the richest soil in process of slow formation, and throughout its broad area, particularly along its border, may be found some of the best dairying sections of the State. But in the wheat ranches of the Montezuma Hills may be found a part of the 45,000 acres which go to make up eastern Solano, and which are about

evenly divided into lowland and upland. Here the yield is large, and the production certain.

The grain sections of the county are rich by nature's gifts, and by the accumulations of her people. It is not every locality which can boast millionaires whose lives have been devoted to wheat-growing, but they can be found in this county.

In manufacturing Solano County is prominent, with the location of the navy yard at Mare Island, opposite Vallejo. In Benicia, in addition to the Government arsenal, there is an extensive manufactory of agricultural implements, also extensive tanneries, which are continually being enlarged. The Bay Counties power line, which traverses Solano County transversely from the northeast to the southwest, furnishes Dixon, Elmira, Vacaville, Suisun, Fairfield, Cordelia, Benicia, and Vallejo a potentiality that surpasses Holyoke or Fall River as manufacturing centers. It is being taken advantage of north of Suisun by an extensive plant for making cement. Benicia is a former State capital, as was Vallejo, has a population of several thousand, a climate that is cool and exhilarating, and is an attractive residence location tributary to San Francisco.

Vallejo is the metropolis of the county. It is a money city. It is a progressive city. Its people are up and doing. They have abundant faith in public utilities, and they practice it as well. The spirit of self-reliance predominates. It is coming to be a city of homes. Located on a magnificent waterway, and built on hills that lend grandeur to the view; with a climate that is balmy with the rigor of sea air, equable in its character, and practically free from fogs, Vallejo is an ideal residence city. There is an air of stability in its physical make-up. Ever since the Mare Island Navy Yard, its chief dependence, was taken from a political and placed upon a civil-service basis, thus insuring retention of employés regardless of changes in national administrations, Vallejo has been advancing. One good thing has led to another as the result of this policy, and not the least meritorious is the confidence it gives the people to engage in business for themselves. It owns and operates its own water works. The system is a gravitation one, the water being brought to the city from the mountains, 15 miles distant in a direct line. No city in the State has better results or better water. In the meantime, the city has constructed a most perfect sewer system, put down substantial sidewalks, has bituminized streets, and has many hundreds of new and modern cottages that make for attractiveness. Its latest move is to secure the construction of electric railroads that are to connect Benicia, in this county, and Napa and St. Helena, in Napa County. The large plant at Mare Island is to-day equipped with the finest machinery for the construction of men-of-war.

STATISTICS OF SOLANO COUNTY, 1905-6.

General Statistics.	
Area, 911 square miles, or 583,000 acres.	
Number of farms	2,900
Number of acres assessed	518,777
Value of country real estate	$9,869,554
Of improvements thereon	$1,692,649
Of city and town lots	$1,269,133
Of improvements thereon	$2,700,000
Of personal property	$2,360,000
Total value of all property	$17,891,326
Expended on roads, last fiscal yr.	$56,320
Number of miles of public roads	650

General Statistics—Continued.	
Road levy per $100, 1906	40 cts.
Value of county buildings	$60,000
Railroads, steam—miles, 73.45; assessed value	$1,101,750
Railroads, electric—miles, 3.5; assessed value	$8,000
Electric power plants—6; assessed value	$125,000
Electric power lines—miles, 117½; assessed value	$95,850
Number of acres irrigated	1,500

STATISTICS OF SOLANO COUNTY, 1905-6—Continued.

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	135,600	25,000	$500,000
Barley	55,840	30,000	500,000
Oats	7,300	1,000	30,000
Corn	600	200	6,000
Total cereals	199,340	56,200	$1,036,000
Alfalfa hay	------	15,000	$150,000
Grain hay	------	25,000	150,000
Total hay	------	40,000	$300,000

Number of Fruit Trees and Vines.

	Bearing.
Apple	2,350
Apricot	34,175
Cherry	35,680
Fig	5,515
Lemon	2,040
Nectarine	3,540
Olive	2,960
Orange	2,000
Peach	335,640
Pear	204,730
Plum	6,000
Prune	368,000
Almond	90,160
Walnut	3,870
Total fruit trees	1,096,660
Table grapes (acres)	500
Wine grapes (acres)	1,380

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	10,000	------
Apricot	320,000	$14,000
Beans (sacks)	175,000	------
Corn	100,000	2,250
Cherries	1,200,000	200,000
Figs	1,250,000	9,000
Grapes	8,000,000	100,000
Nectarines	80,000	2,000
Pears	18,000,000	180,000
Peaches	12,000,000	------
Peas	27,500	1,100
Plums	1,000,000	60,000
Irish potatoes (sacks)	15,000	22,500
Tomatoes	100,000	4,000
Dried—	Pounds.	Value.
Almonds	200,000	$28,000
Apricots	80,000	12,000
Figs	200,000	7,500
Nectarines	20,000	1,400
Pears	1,200,000	102,000
Peaches	2,400,000	228,000
Plums	40,000	2,800
Prunes	6,000,000	180,000
Walnuts	72,000	1,080
Silver prunes	120,000	8,400
Imperial prunes	60,000	3,600
Ruby prunes	450,000	16,875
Canned—	Cases.	Value.
Tomatoes	20,000	------
Asparagus	12,500	------

Wines, Brandies, Etc.

Number of wineries, 3; number of distilleries, 3; number of breweries, 3.

	Gallons.	Value.
Wine—Angelica	10,000	$5,000
Claret	700,000	175,000
Port	30,000	15,000
Sauterne	100,000	25,000
Sherry	40,000	20,000
Tokay	20,000	4,000
Zinfandel	100,000	25,000
Totals	1,000,000	$269,000
Beer (barrels)	14,000	$84,000
Brandy	200	5,000
Vinegar	40	300

Fish Industry.

	Pounds.	Value.
Salmon	1,000,000	$40,000
Cured	400,000	50,000
Cured codfish	700,000	52,500

Livestock Industry.

	Number.	Value.
Cattle—Beef	7,500	$15,000
Dairy Cows—Graded	9,200	184,000
Holsteins	210	10,500
Jersey	100	5,000
Shorthorns	300	30,000
Calves	6,000	30,000
Swine	15,000	90,000
Horses—		
Thoroughbred	100	5,000
Standard-bred	100	6,000
Common	12,000	400,000
Colts	1,000	20,000
Mules	1,500	150,000
Sheep—		
Imported or fine	1,000	10,000
Common	75,000	450,000
Lambs	60,000	120,000
Wool (pounds)	1,000,000	200,000

Dairy Industry.

	No.	Production.	Value.
Creameries	6	------	------
Skimming stations	90	------	------
Butter (pounds)		2,470,000	$450,000
Cond. Milk (cases)		10,000	20,000
Cream (gallons)		134,000	107,000

Poultry and Eggs.

	Dozen.	Value.
Chickens	7,000	$30,000
Ducks	100	500
Turkeys	150	5,000
Eggs	600,000	118,000

Forest Products.

	Amount.	Value.
Fuel, wood (cords)	5,000	$30,000

STATISTICS OF SOLANO COUNTY, 1905-6—Continued.

Miscellaneous Products.

	Number.
Bees (hives)	600

Manufactories.

	No.	No. of Employes.	Quantity Produced.	Value of Product.
Cement (tons)	1	500	125,000	$1,250,000
Flouri'g mills (bbls.)	2	100	300,000	1,200,000
Artific'l stone	1	8	100,000	25,000

Manufactories—Continued.

	No.	No. of Employés.	Quantity Produced.	Value of Product.
Foundries and iron works (tons)	1	200	2,500	$275,000
Leather goods (sides)	3	295	315,000	2,000,000
Tanneries (sides)	3	295	315,000	2,000,000
Crushed rock (tons)	1	200	100,000	78,000

SONOMA COUNTY.

Sonoma County is bounded on the west by the Pacific Ocean, for more than 65 miles that boundary conforming to the irregularities of the shore, while on San Pablo Bay it has a frontage of 20 miles.

There is no sameness in the surface of the county. Variety is a leading characteristic. Valleys, and hills, and mountains appear to have been planned and distributed to give the best effect. The great central valley extends the entire length of the county from south to north, and commands attention by remarkable fertility. The area on which rough stone interferes with farming operations is small. Out of the area of land in the county at least 200,000 acres are valley land, the richest soil known, being a black loam; 200,000 acres are rolling or higher table-land, of an exceedingly rich alluvial brown soil, with considerable sand. This is the best fruit land. We may class 200,000 acres as foothill lands, adapted to many kinds of agricultural and horticultural products and pasturage. At least 100,000 acres of mountain land are adapted to grazing, and about 80,000 acres are covered with redwood timber of a magnificent growth.

On the coast line are several small but valuable harbors, bays, and beaches.

Sonoma Valley is about 20 miles in length, with an average width of 8 miles. It lies parallel to Petaluma Valley, from which it is separated by a range of mountains.

The streams and watercourses of Sonoma County are numerous. Russian River, the largest stream, enters on the north, flows in a southeasterly direction for 20 miles, turns Fitch Mountain, and finds its way to the lowest depression in the Santa Rosa basin, from which it breaks through a gap in the Coast Range to the Pacific Ocean. This river gathers the waters from three fifths of the area of the county.

Sonoma County, besides her great wine, fruit, dairy, stock, and other large industries, produces as much poultry and eggs as all the balance of the State put together. The advantages of the poultry and egg industry are its nearness to a reliable market, quick cash returns, and length of season. The vicinity of Petaluma is largely devoted to this industry; possibly one half of the poultry and eggs shipped from the county are from there. On an acre of ground can be raised and kept successfully 400 laying hens, the year round. These chickens, with ordinary care and attention, such as an intelligent and industrious man would give to any business, will net the owner from $1 to $1.25 a hen clear profit a year, over and above the cost of feed, which is all purchased and paid for, except such as vegetables, kale, and feed raised in the garden. With a few acres well stocked with chickens a family can make a good, independent living. The poultry business is like the banking business—cash on the spot, and there is no surer road to success than along the chicken route in Sonoma County.

Cattle are raised on a large scale, principally for dairying purposes. Our grazing land is unsurpassed. In the valley lands it requires about 5 acres per cow per year for dairying purposes; in the hill lands from

10 to 15 acres per cow. In the northern part of the county sheep-raising forms an important industry. Much of the coast region is devoted to pasturage purposes.

The moisture that rises from the ocean near the coast is absorbed by the ground, and from this fact the pastures are kept green nearly the year round, making this section the ideal spot for the dairyman and stock-raiser. The breeds of milch cows represented are mostly Jerseys, Holsteins, and Ayrshires, with some strains of Durhams, and fine American breeds. All milk used at the creameries is bought and sold by weight. In well-managed dairies the yield of butter per cow per annum is from 150 to 200 pounds.

The value of the growth of stock cattle is $10 per head per year, until the limit is reached, and this without other feed than that obtained by grazing upon lands valued at from $10 to $40 per acre.

In the production of hops Sonoma County leads the world. There is no other country that can produce the quality equal to a choice Sonoma. Nearly all other hop-raising sections, outside of a few counties in this State, are subject to crop failures, caused chiefly by vermin, mold, honey-dew, rust, red-spider, or severe storms. Such calamities are unheard of in this county. During the hop harvest the growers are favored with bright, sunshiny days. The very best quality of soil—and there is plenty of it—together with an excellent climate, is required for a successful culture of hops. In New York state hops grow on elevated land, while in Sonoma County the rich, sandy loam of the river and creek bottoms is employed. The richness of the soil, together with the adaptable climate, assures an average crop of about 1,800 pounds of dried hops to the acre. Most of the hops are shipped to Eastern and European markets, but there is a growing demand for our product in Australia, New Zealand, and the Orient.

This county produces large quantities of wheat, oat, barley, and alfalfa hay. Good hay can be raised wherever one can plow. It is harvested in May and June.

The soil is particularly adapted to oats, which many consider the most profitable of our grain crops. However, wheat, barley, and corn are extensively cultivated in every locality at a splendid profit. Corn is grown mostly on river-bottom land, and yields on an average 65 bushels to the acre.

One of the chief industries is fruit-growing. The estimated value of a fruit tree from the time it is planted to the time it comes into bearing is $1 per year. The right season for planting is during February and March. While many fruit-driers are operated, many authorities prefer the sun-drying process, which involves no expense and can always be relied upon. The sun-dried product is of superior quality and flavor, and will bring a correspondingly higher price.

The peach is a great favorite, as the trees commence to bear the second year after planting. The soil best suited to them is a sandy loam, and they may be cultivated with equal success either on the hillsides or in the valleys. After the trees come into bearing the income will depend principally upon the care bestowed upon them. Peaches of standard size for the market are those that will fill a 2-inch hole. If larger they are called "extras," and if smaller, "seconds." The latter are mostly used for drying. All varieties of the peach thrive.

Prunes should have the best quality of soil, for the tree is a heavy bearer.

The growing of citrus fruits, though comparatively a recent industry, has gained a strong foothold, and present indications point to a steady increase in acreage.

While the olive requires a good, well-drained soil, there are many orchards that are planted around the rocky foothills. They come into bearing after five or six years. Olive culture is making rapid strides. The oil produced has established an excellent reputation, and is usually sold ahead of its production.

Sonoma County is the true home of the English walnut. It is only recently that the walnut has attracted the attention of growers in this county, but now that its possibilities as a money-maker are becoming more widely known, the acreage devoted to its cultivation is rapidly increasing, and it promises to become one of our great industries.

Sonoma is the greatest blackberry county. The blackberry season begins in the latter part of June, and runs into September. Raspberries are harvested in May, June, July, and August.

Gooseberries are a valuable product, and here are raised the largest and finest varieties.

Many strawberries are not shipped, most of the supply being used for home consumption, but those raised are of the very best quality.

Sonoma grows vegetables throughout the year, and often raises from two to three crops annually. Potatoes are grown in almost every section, attain large size, and are of the finest quality. Asparagus is particularly adapted to the soil and climate. Tomatoes are produced in great quantities for canning. String beans are also grown extensively for this purpose. Sonoma watermelons are of large size and fine flavor.

Sonoma is the largest and most important grape- and wine-producing county in the State. Her wines are justly famed throughout the world, and took first premium at the Genoa Exposition in Italy in 1892. A gold medal was awarded at the World's Fair in Chicago in 1893, and also at the Midwinter Fair in San Francisco in 1894; and the grand prize, the highest award, was given her wines at the St. Louis World's Exposition by a jury composed of twenty-one members, most of whom were French and German experts. In order to accommodate the enormous yield of its own section alone, one wine company has erected a wine tank with a capacity of half a million gallons, the largest in the world.

Tobacco-growing has made a fair start, and is one of the coming industries. The plant will thrive in almost every section, and is now quite extensively grown and manufactured in many localities, and the quality is excellent. David Hetzel has raised tobacco for many years near Guerneville.

The amount of lumber manufactured by the sawmills runs into millions of feet. A large amount of shingles, pickets, and shakes is made in the county.

John Schindler, near Melitta, has several hundred tea plants in his garden, and thinks he will be able to place his tea on the market in a year or so.

Labor commands good prices, especially competent and experienced farm hands.

Sonoma County has a large number of mineral springs.

The principal cities are: Santa Rosa, Sonoma, Petaluma, Healdsburg, Cloverdale, and Sebastopol.

The Japan current gives us unfailing rains, and regulates the temperature both summer and winter.

Compared with the East, our roads are more solid and permanent. This is due to the absence of excessive frosts, which crack and break up the hardest ground, of whatever material it is composed.

The many and varied health-giving mineral waters, fishing and hunting locations, and summer resorts, make this county a paradise for the pleasure-seeker. Thousands of visitors spend the summer living in tents pitched along the many beautiful streams and in the numerous picturesque spots.

STATISTICS OF SONOMA COUNTY, 1905-6.

General Statistics.

Area, 1,500 square miles, or 960,000 acres.	
Number of acres assessed	877,395
Value of country real estate	$14,086,265
Of improvements thereon	$4,368,540
Of city and town lots	$3,768,290
Of improvements thereon	$3,797,945
Of personal property	$3,566,990
Total value of all property	$29,588,030
Number of miles of public roads	1,500
Road levy per $100, 1906	36 cts.
Railroads, steam—miles, 174.54; assessed value	$2,281,431
Railroads, elect'c, assessed value	$183,475
Electric power plants—2; assessed value	$103,220
Electric power lines—miles, 40; assessed value	$37,000

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	2,620	1,500	$37,500
Barley	1,520	800	12,500
Oats	5,810	2,550	51,000
Corn	870	1,200	21,600
Alfalfa hay	350	1,000	8,000
Grain hay	38,560	74,000	555,000

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	211,210	68,420	279,630
Apricot	19,920	20,110	40,030
Cherry	43,130	17,120	60,250
Fig	4,150	975	5.125
Lemon	780	150	930
Nectarine	810	120	930
Olive	61,650	40,210	101,860
Orange	9,120	1,575	10,695
Peach	247,640	69,110	316,750
Pear	78,110	20,140	98,250
Plum	6,240	1,150	7,390
Prune—French	517,450	85,670	603,120
Other kinds	45,870	4,160	50,030
Quince	1,270	365	1,635
Almond	7,540	2,265	9,805
Walnut	4,470	910	5,380
Table grapes (acres.)	490	290	780
Wine grapes (acres.)	17,210	4,440	21,650
Blackberries (acres.)	700	----	700
Currants (acres.)	50	----	50
Gooseberries (acres.)	20	----	20
Raspberries (acres.)	100	----	100
Strawberries (acres.)	150	----	150
Loganberries (acres.)	250	----	250

Fruits, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	1,000,000	$75,000
Asparagus	40,000	2,000
Blackberries	1,400,000	98,000
Beans	3,000	150
Cabbage	4,000	40
Celery	1,000	100
Corn	14,000	280
Currants	2,000	140
Cherries	225,000	11,250
Gooseberries	2,000	------
Lemons (boxes)	100	400
Onions	100,000	1,000
Oranges (boxes)	500	2,000
Pears	40,000,000	40,000
Peaches	10,000,000	20,000
Persimmons	1,000	500
Plums	100,000	10,000
Potatoes—Irish (s'ks)	60,000	60,000
Prunes—French	10,000,000	175,000
Quinces	10,000	200
Raspberries	80,000	4,000
Strawberries	50,000	3,000
Tomatoes	140,000	1,500
Walnuts	5,000	1,000
Loganberries	200,000	40,000

Dried—	Pounds.	Value.
Apples	2,000,000	$13,000
Apricots	2,000	150
Blackberries	40,000	3,200
Pears	10,000	800
Peaches	300,000	21,000
Plums	80,000	4,800
Prunes—French	4,000,000	300,000

Wines, Brandies, Etc.

Number of wineries, 77; number of distilleries, 44; number of breweries, 5.

	Gallons.	Value.
Wine—Angelica	288,000	$43,200
Burgundy	304,000	60,800
Cabernet	400,000	60,000
Chianti	1,500	300
Champagne	1,000	500
Claret	4,224,000	633,600
Hock	776,000	155,200
Port	8,000	2,000
Riesling	528,000	105,600
Sauterne	384,000	76,800
Sherry	168,000	42,000
Zinfandel	7,080,000	1,062,000
Beer (barrels)	16,000	96,000
Brandy	83,200	16,640

STATISTICS OF SONOMA COUNTY, 1905-6—Continued.

Livestock Industry.

	Number.	Value.
Cattle—Beef	600	$18,000
Stock	11,400	228,000
Dairy Cows—Graded	22,150	443,200
Ayrshire	20	1,000
Devon	30	1,500
Holsteins	30	1,500
Jersey	100	5,000
Red Polled	20	1,000
Shorthorns	320	16,000
Calves	5,850	58,500
Swine	2,750	8,250
Horses—		
Thoroughbred	60	9,500
Standard-bred	45	4,500
American	7,540	301,600
Common	5,110	127,750
Colts	1,780	26,500
Sheep—Imported	31	310
Graded	1,200	4,200
Common	20,960	41,920
Lambs	1,800	900
Goats—Angora	1,050	2,100
Common	1,340	2,010
Wool (pounds)	125,500	12,550

Poultry and Eggs.

	Dozen.	Value.
Chickens	42,535	$212,775
Ducks	600	3,250
Geese	400	3,600
Turkeys	500	6,000
Eggs	4,797,321	959,465

Dairy Industry.

	No.	Production.	Value.
Dairies	250	------	------
Creameries	10	------	------
Butter (pounds)	--	3,110,000	$466,500
Cheese (pounds)	--	96,000	9,600

Forest Products.

	Amount.	Value.
Sawmills (number)	10	$80,000
Charcoal (sacks)	100,000	2,500
Fuel, wood (cords)	500,000	1,000,000
Lumber—redwood (ft)	46,900,000	469,000
Pickets (pieces)	200,000	500,000
Piles	4,000	12,000
Posts (pieces)	100,000	10,000
Railroad ties (pieces)	50,000	15,000
Shakes	100,000	1,200
Shingles	15,000,000	37,500

Miscellaneous Products.

	Acres.	Pounds.	Value.
Hops	2,200	2,200,000	$300,000
Tobacco	10	------	------

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value. of Product.
Brick (thous'd)	3	100	2,500	$20,000
Brooms (doz.)	1	10	1,250	3,750
Cigars (thous'd)	9	32	1,800	54,000
Confectionery	10	20	------	------
Flouring mills	2	31	------	------
Flour (bbls.)		--	36,000	------
Meal (tons)		--	150	------
Bran (tons)		--	625	------
Shorts (tons)		--	625	------
Barley (tons)		--	5,200	------
Shoes (dozen)	2	105	9,000	230,000
Olive oil (gals.)	3	25	10,000	30,000
Planing mills	5	--	------	------
Tanneries (sid's)	6	195	203,000	963,500
Woolen mills	1	25	------	50,000

Productions Shipped Out of State.

	Amount.
Hay	65,000 tons
Oats	5,000 tons
Apples	100,000 boxes
Apricots	2,000 boxes
Blackberries	3,000 cases
Cherries	500 boxes
Currants	3,000 boxes
Peaches	30,000 boxes
Pears	20,000 boxes
Plums	1,000 boxes
Prunes—French	5,000 lbs.
Quinces	2,000 lbs.
Raspberries	1,000 lbs.
Chickens	41,580 doz.
Turkeys	490 lbs.
Eggs	497,000 doz.
Asparagus	30,000 lbs.
Beans	1,000 lbs.
Hops	2,150,000 lbs.
Onions—Dried	4,000 sacks
Potatoes—Irish	60,000 sacks
Tomatoes	1,500 boxes
Butter	3,095,000 lbs.
Cheese	68,000 lbs.
Beer	1,000 bbls.
Brandy	81,000 gals.
Lumber	44,000 M ft.
Brick	1,000 M
Cigars	5,000 C

STANISLAUS COUNTY.

Stanislaus County is near the geographical center of the State, and extends entirely across the northern end of the San Joaquin Valley, with its western edge at the summit of the Coast Range Mountains, and its eastern line extending along the foothills of the Sierra Nevadas.

The San Joaquin River, which drains the valley, traverses the county a little west of the center. Its two most important tributaries on the east are the Stanislaus and Tuolumne rivers, which, like the San Joaquin River, are navigable for the greater part of the year. The former, for some distance, forms the northern boundary of the county, while the latter flows nearly parallel to it through the center of the county. One or two small and unimportant streams find their way to the San Joaquin from the western hills.

The general nature of the land is that of a level plain, sloping gently from the foothills on the east and west, down to the San Joaquin. This condition not only assures good drainage, but also offers excellent facilities for irrigation, of which advantage has already been taken in several localities.

There are three separate irrigation systems in the county, the largest of which is comprised in the Modesto and Turlock joint districts. The former lies between the Stanislaus and Tuolumne rivers, and the latter between the Tuolumne and Merced rivers—both being on the eastern side of the San Joaquin River. Both of these districts receive their water supply from the Tuolumne River at the La Grange dam, which was built at the cost of $550,000, and they contain together over 260,000 acres of most excellent land. This water, coming from the Tuolumne River, which has the largest watershed of the San Joaquin's tributaries, is given in an endless supply by the melting of the eternal snows of the Sierra Nevadas. These districts were originated under the Wright law, by which the ownership of the water is vested in the land. Two privately owned irrigation systems are also to be found in the county. One of these lies along the Stanislaus River in the northern part of the county, and the other is on the west side of the San Joaquin River.

This great county, formerly devoted almost entirely to the production of grain, is now entering into an era of phenomenal horticultural development. This is due to the recently acquired irrigational advantages which have made possible the production of any form of vegetable life known to the temperate and semi-tropical zones. Alfalfa production and dairy industries have come to the front with surprising rapidity. At present, among the principal products of the county are sweet potatoes, nuts, grapes, oranges, lemons, and other fruits.

The county is traversed by four parallel railroads, three of which are the property of the Southern Pacific Railroad Company, the other being the transcontinental line of the Santa Fé Railroad. A fifth line, the Sierra Railroad, runs from Oakdale up into the Sierra Nevada Moun-

tains, tapping the rich mining region of Tuolumne, and a short line, known as the Oakdale Western, connects this railroad with the Santa Fé at Riverbank.

The principal cities of the county are Modesto, the county seat, with an estimated population of 4,000, Oakdale on the eastern side of the county, and Newman on the west side of the San Joaquin River. The other towns are Turlock, Westley, Grayson, Salida, Ceres, Waterford, Montpellier, Knights Ferry, and La Grange—all centers of richly producing localities.

STATISTICS OF STANISLAUS COUNTY, 1905-6.

General Statistics.

Area, 1,486 square miles, or 965,900 acres.	
Number of farms	3,090
Number of acres assessed	965,900
Value of country real estate	$9,142,695
Of improvements thereon	$987,460
Of city and town lots	$632,430
Of improvements thereon	$967,740
Of personal property	$2,268,495
Total value of all property	$13,998,820
Expended on roads, last fiscal yr.	$47,668
Expended for bridges, last fiscal year	$48,021
Number of miles of public road	673
Road levy per $100, 1906	40 cts.
Value of county buildings	$70,000
Irrigating ditches—miles, 300; cost	$587,900
Railroads, steam—miles, 120.18; assessed value	$1,865,495
Electric power plants—3; assessed value	$18,150
Electric power lines—miles, 64; assessed value	$18,700
Number of acres irrigated	46,930

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	195,600	70,500	$1,250,000
Barley	80,175	35,460	861,040
Oats	19,854	8,460	186,120
Rye	2,874	1,150	20,700
Corn	435	750	14,900
Total cereals	298,938	116,320	$2,332,760
Alfalfa hay	34,560	310,480	$1,510,480
Grain hay	------	873,470	5,461,840
Total hay	------	1,183,950	$6,972,320

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	13,560	2,160	15,720
Apricot	22,620	4,870	27,490
Cherry	6,485	1,320	7,805
Fig	49,760	98,650	148,410
Lemon	5,940	1,763	7,703
Nectarine	1,246	480	1,726
Olive	21,640	8,858	25,498
Orange	19,270	4,680	23,950
Peach	52,830	116,940	169,770
Pear	12,490	4,289	16,779
Plum	10,960	1,420	12,380
Prune	19,850	2,680	22,530

Fruit Trees and Vines—Continued.

		Bearing.	Non-Bearing.	Total.
Quince		2,810	2,290	5,100
Almond		21,640	4,890	26,530
Chestnut		3,510	1,470	4,980
Walnut		11,580	1,320	12,900
Total fruit trees		276,191	253,080	529,271
Raisin grapes	acres.	234	723	957
Table grapes	acres.	130	915	1,045
Wine grapes	acres.	576	1,164	1,742
Total acres grapes		940	2,802	3,742
Blackberries	acres.	18	----	18
Loganberries	acres.	20	----	20
Raspberries	acres.	15	----	15
Strawberries	acres.	63	----	63
Total acres berries		116	----	116

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	1,164,832	$58,241
Apricots	1,856,927	37,138
Asparagus	7,585	379
Blackberries	16,845	834
Beans	42,000	2,100
Beets	83,000	2,075
Cabbage	75,000	1,500
Celery	58,000	5,800
Cauliflower	17,450	1,745
Corn	26,000	1,520
Cherries	685,420	34,271
Figs	116,500	5,825
Grapes	43,960,500	439,605
Limes (boxes)	210	630
Lemons (boxes)	15,618	15,618
Loganberries	15,480	770
Nectarines	74,620	5,223
Onions	31,000	620
Oranges (boxes)	81,420	81,420
Olives	8,940	178
Pears	875,340	17,506
Peaches	4,562,810	91,256
Peas	66,940	3,347
Plums	39,460	789
Irish potatoes	140,000	2,100
Sweet potatoes	9,650,000	144,750
Prunes	1,438,560	71,925
Quinces	431,200	21,560
Raspberries	64,800	3,240
Strawberries	182,300	9,115
Tomatoes	31,705,600	634,112

STATISTICS OF STANISLAUS COUNTY, 1905-6—Continued.

Fruit, Vegetables, Etc.—Continued.

Dried—	Pounds.	Value.
Almonds	896,520	$89,652
Apples	64,520	6,452
Apricots	95,140	9,514
Beans	120,400	12,040
Corn	86,400	1,728
Figs	293,500	8,805
Grapes	173,450	8,672
Onions	1,250	125
Pears	6,480	648
Peaches	82,400	8,240
Prunes	540,300	54,030

Wines, Brandies, Etc.

Number of wineries, 1; number of distilleries, 3.

	Gallons.	Value.
Wine—Angelica	2,000	$2,000
Claret	60,000	15,000
Madeira	8,000	4,000
Port	4,000	4,000
Sherry	3,000	3,000
Tokay	350	350
Totals	77,350	$28,350
Brandy	10,000	25,000
Cider	850	255

Livestock Industry.

	Number.	Value.
Cattle—Beef	7,580	$227,400
Stock	21,794	653,820
Thoroughbred	270	12,700
Dairy Cows—Graded	11,230	336,900
Dutch Belted	30	1,800
Herefords	35	2,100
Holsteins	42	2,100
Jersey	97	4,850
Red Polled	20	1,000
Calves	21,235	106,175
Swine	35,842	215,052
Horses—		
Thoroughbred	9	13,500
Standard-bred	53	5,300
Common	7,283	291,320
Colts	1,986	39,720
Mules	5,893	294,650
Sheep—Imported	150	600
Common	45,860	91,720
Lambs	20,845	20,845
Common Goats	1,683	3,366
Wool (pounds)	624,886	62,488

Dairy Industry.

	No.	Production.	Value.
Creameries	6	------	------
Butter (pounds)	--	1,585,235	$315,467
Cream (gallons)	--	7,314,145	2,461,485

Poultry and Eggs.

	Dozen.	Value.
Chickens	29,460	$147,300
Ducks	240	1,440
Geese	30	420
Turkeys	365	6,570
Eggs	412,000	82,400
Total value		$238,130

Forest Products.

	Cords	Value.
Fuel, wood	42,131	$152,786

Power used for mills and manufactories in county: Steam—number, 17; electrical—number, 11; water—number, 1, electric generator; gas—number 1, pumping plant; gasoline—number, 5.

Miscellaneous Products.

	Pounds.	Value.
Bees (hives)—No., 912	------	$912
Beeswax	2,400	600
Honey	35,000	1,250
Grass seed	500	125

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value of Product.
Brick	1	5	110,000	$1,100
Cigars	1	3	150,000	6,000
Confect'ry (lbs.)	4	10	2,000	200
Flouring mills (barrels)	1	152	25,000	75,000
Hides (pounds)		--	600,000	60,000
Lard (pounds)		--	750,000	75,000
Meat packed (tons)	1	17	27,500	55,000
Tallow (barrels)		--	4,000	23,500
Olive oil (gals.)	3	16	3,300	13,200
Pickled olives (gallons)		--	550	360
Planing mills	3	18	------	145,000

SUTTER COUNTY.

Sutter County is skirted on the west by the Sacramento River; on the east by Feather River; the former a navigable stream, the latter navigable only during stages of high water. The Butte County Land Company is now extending its main ditch into the upper part of the county, but irrigation from it has not begun as yet.

The Northern Electric Company is building its railroad through the northern part of the county, and will be in operation in a few months. The Western Pacific Company is building across the southeast part of the county. At present all irrigation is done by private plants.

Important industries—Agriculture and horticulture.

STATISTICS OF SUTTER COUNTY, 1905-6.

General Statistics.

Area, 580 square miles, or 374,515 acres.	
Number of farms	955
Number of acres assessed	373,000
Value of country real estate	$4,220,830
Of improvements thereon	$727,375
Of city and town lots	$77,970
Of improvements thereon	$174,950
Of personal property	$875,220
Total value of all property	$6,076,350
Expended on roads, last fiscal year	$23,389
Expended for bridges, last fiscal year	$1,100
Number of miles of public roads	700
Road levy, 1906	$21,000
Value of county buildings	$41,000
Irrigating ditches—cost	$10,000
Railroads, steam—miles, 26.63; assessed value	$601,450
Electric power lines—miles, 46¼; assessed value	$23,375
Number of acres irrigated	400

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	22,763	5,235	$104,700
Barley	22,828	5,136	81,315
Oats	------	------	43,980
Corn	800	1,000	25,000
Buckwheat	400	3,000	7,500
Total value	------	------	$262,495
Alfalfa hay	1,800	5,400	$32,400
Grain hay	------	------	104,500
Total value	------	------	$136,900

Dairy Industry.

Milk shipped to outside creameries, 200,000 gallons, valued at $19,500.

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	5,500	500	36,000
Apricot	9,000	600	9,600
Cherry	3,000	------	3,000
Fig	5,700	------	5,700
Lemon	570	------	570
Olive	1,000	------	1,000
Orange	2,000	------	2,000
Peach	132,700	5,010	137,710
Pear	10,645	531	11,176
Plum	4,000	------	4,000
Prune	35,650	------	35,650
Quince	100	------	100
Almond	30,079	9,645	39,724
Walnut	150	------	150
Total fruit trees			286,380
Raisin grapes (acres.)	1,800	232	2,032
Table grapes (acres.)	75	----	75
Wine grapes (acres.)	700	----	700
Total grapes	2,575	232	2,807
Blackberries (acres.)	----	----	4
Loganberries (acres.)	----	----	5
Strawberries (acres.)	----	----	2
Total berries			11

Fruit, Vegetables, Etc.

Green—	Total Production. Pounds.	Value.
Apples	35,000	$350
Apricots	300,000	6,000
Beans	900,000	22,000
Cauliflower	2,000,000	25,000
Cherries	40,000	4,000
Grapes	2,300,000	23,000
Lemons (boxes)	100	200
Loganberries	10,000	1,000
Oranges (boxes)	5,000	2,500

STATISTICS OF SUTTER COUNTY, 1905-6—Continued.

Fruit, Vegetables, Etc.—Continued.

Green—	Total Production, Pounds.	Value.
Pears	600,000	$150,000
Peaches	8,000,000	160,000
Plums	40,000	400
Irish potatoes	400,000	2,000
Sweet potatoes	200,000	4,000
Tomatoes	120,000	1,200
Total value		$401,650

Dried—	Pounds.	Value.
Almonds	150,000	$15,000
Figs	1,000,000	30,500
Prunes	320,000	10,800
Raisins	1,200,000	96,000
Total value		$152,300

Canned—	Cases.	Value.
Peaches	38,000	$104,000

Livestock Industry.

	Number.	Value.
Cattle—Beef	100	$4,000
Stock	61,000	80,400
Dairy Cows—Graded	3,250	82,680
Calves	2,630	25,850
Swine	5,870	16,205
Horses—Thoroughb'd	5	6,500
Standard-bred	16	1,855
Common	3,032	124,575
Colts	955	21,535
Mules	2,120	112,930
Sheep—		
Imported or fine	199	825
Common	55,250	134,555
Lambs	12,118	6,065
Total stock all kinds	146,545	$617,975

Poultry and Eggs.

	Dozen.	Value.
Chickens	3,410	$12,900
Turkeys	68	740
Eggs	170,000	61,200
Total value		$74,840

Miscellaneous Products.

	Pounds.	Value.
Bees (hives) No., 1,093		$1,545
Broomcorn	3,200,000	140,000
Honey	10,930	1,095
Hops	120,870	12,985
Clover seed	21,000	1,500

Manufactories.

Flouring mills, 1; number of employés, 4; quantity produced, 18,000 barrels, valued at $80,000.

Productions Shipped Out of State.

	Amount.
Barley	4,500 tons
Corn	500 tons
Broomcorn	3,000,000 lbs.
Oats	2,000 tons
Wheat	5,100 tons
Almonds	150,000 lbs.
Cherries, fresh	2,000 boxes
Grapes, fresh	100,000 boxes
Peaches, dried	20,000 lbs.
Peaches, canned	15,000 cases
Raisins	1,150,000 lbs.
Chickens	450 dozen
Turkeys	5,760 lbs.
Eggs	160,000 dozen
Irish potatoes	4,000 sacks
Sweet potatoes	500 sacks
Cheese	150,000 lbs.
Flour	15,000 bbls.

TEHAMA COUNTY.

Tehama County occupies the upper or northern portion of the Sacramento Valley. It is 200 miles north of San Francisco, and 120 miles north of Sacramento. Part of its eastern boundary follows the summit of the Sierra Nevada Mountains, and its western boundary lies along the summit of the Coast Range. Its greatest length is 78 miles; its width from north to south, 38 miles. Of its area, speaking roughly, 700,000 acres are agricultural lands, 800,000 grazing, and 500,000 timber.

Red Bluff is the county seat. It is a clean, modern little city, located upon an elevated plain, with superior drainage, and with the Sacramento River washing the foot of the bluffs at one side. Other towns are Corning, Tehama, Vina, Paskenta, and Kirkwood.

The county is easily reached, being on the line of the California and Oregon branch of the Southern Pacific Railroad. Two lines of this road converge at the town of Tehama, 12 miles below Red Bluff; one coming up the valley on the west side and the other on the east side of the Sacramento River. North of Tehama there is but one line of track. The Sacramento River is navigable to Red Bluff, and steamboats from San Francisco and Sacramento make weekly trips up and down during most of the year.

Telegraph and telephone lines follow the railroad, and several private lines are in operation.

The public school system is complete and excellent. A school is maintained wherever there is need of one.

The Sacramento River runs through the county from north to south. From this river there is a rise to the east and west until the summit of the mountain ranges is reached. South of Red Bluff and west of the river lie broad plains; beyond these rolling hills developing into the foothills of the mountains, and then the mountains themselves, which rise quite abruptly to a height of from 3,000 to 9,000 feet.

In the alluvial land along the river the soil is mainly a dark brown, almost black, sandy loam, rich and deep. The table-land to the east is so rocky as to be of no use except for stock ranges. On the west of the river the loamy lands merge into clayey loam second bottom; farther west is the sandier soil of the plains, gray, brown, and red in color; then the hills with reddish soil and gravelly loam. The creek bottoms have generally a yellowish soil. North of Red Bluff, in the hilly country, it is chiefly reddish clay and gravelly loam.

Tehama County is well watered. Numerous creeks carry streams from the mountain snows to the river. Wells can be dug anywhere to reach water at a moderate depth.

Irrigation is really not necessary, but experience has shown that plenty of water means an increase in product and variety. It is practiced to some extent, but mostly for the cultivation of alfalfa. There is a great deal of unappropriated water available for irrigation and the

development of electric power, awaiting only the capital and energy to make it return a large profit.

The principal industries are horticulture, agriculture, stock-raising, and lumbering. There is practically no mining. A large deposit of chrome ore to the west, valuable sulphur springs to the east, some indifferent placer claims to the north, and the story of mining is told.

The fruit industry gives employment to a large number of people, who can engage in healthful outdoor work in summer. Several thousand persons are directly or indirectly engaged in some branch of the fruit business.

Olives are fast coming into favor as a crop and as a food. The tree grows readily and yields abundantly. The fruit brings a good price, and the demand is constant and growing. The fruit is pickled green or ripe.

Oranges and lemons do well and bear abundantly. No attempts were made to plant them in quantity until within the past few years. There are in yards all over the county numberless trees that bear profusely. Several small orchards have been planted within the last few years, but they have not yet come into bearing. The trees are healthy and vigorous.

Almonds are being grown with success.

Raisin grapes, and indeed all grapes, grow remarkably well. The raisins can be cured in the sun during the long summer days.

An immense winery is located on the Stanford ranch in the southern part of the county.

Peaches are the principal fruit. They are shipped green, and are canned and dried. The bulk of the crop is dried.

Prunes are readily cultivated and yield abundantly.

The apricot is the third fruit in importance. All the apricots are dried. The pits are sold for fuel, or for extracting the oil, which is used by druggists and confectioners.

Pears do well. The fruit is nearly all shipped green. The Bartlett is the favorite.

Figs are attracting more attention since the procurement of blastophaga, the insect which fertilizes the Smyrna fig. A great many of these trees are now being planted, and no doubt this fruit will assume a larger place in the output of the county hereafter.

Apples are grown only in the foothills. The chief apple-producing region of the county is at Manton, 35 miles to the northeast of Red Bluff, where very fine apples are raised.

Berries and all small fruits do well. They come into market early and sell readily.

In agriculture there has been a gradual change from the growing of wheat to fruit or other grains.

Hay is made from a mixture of wild oats and wheat grown together and cut when just on the point of turning. It is cured on the ground and then stacked.

Alfalfa, where water can be obtained, is the best of all forage crops. It is a splendid feed for cattle, hogs, and horses.

Experiments are being made looking toward the cultivation of hops and sugar-beets.

The stock business is carried on under conditions that differ from those of the Eastern States, and are differing from those of former years

here. The owner of cattle, sheep, and goats finds it necessary to own or control two ranges: one in the valley for the winter months, and one in the mountains for the summer season. Considerable land has been withdrawn into temporary forest reserves. The number of men engaged in the stock business has greatly increased, and range land has been in greater demand as a consequence.

Sheep-raising is easily the favorite branch of the stock business. This is the principal wool-producing county of Northern California, and indeed of the State. Twice each year the buyers come here, and there is a busy time until the wool is sold. It is sometimes bought before the sheep are sheared. The favorite breeds of sheep are Spanish Merino, French Merino, Southdown, and Cotswold for wool, and Shropshire more particularly for mutton.

The cattle business is conducted in much the same general way as the sheep business, except that the animals do not require constant care and herding; there is a further difference, that nearly every farmer has at least a few head of cattle, while but few of them have any sheep. The favorite breeds of cattle are Holstein, Hereford, Jersey, and Durham.

Of late years Angora goats have come into greater favor. They are hardy animals, readily adapting themselves to a mountainous and hilly country which no other animal can occupy. They will eat almost anything, can protect themselves from wild animals, and their wool or mohair is in demand and brings a good price.

There is everywhere plenty of timber of various kinds for fuel, posts, etc., for immediate local use. Oaks are the principal trees of the valley, except along the streams, where willows, cottonwoods, and sycamores abound. Oak wood is the favorite fuel. But in the Sierras there is a magnificent belt of timber containing a great preponderance of sugar pine, which is one of the finest of timber trees. Several sawmills are located in this timber belt and most of the land, if not all, is now owned by private individuals or corporations.

The wool, lumber, stock, fruit, hay, grain, etc., can all be sold at Red Bluff. A market is always available at San Francisco; and in Red Bluff, the county seat, there are local individuals and firms ready and willing to buy all of these products that are offered. There are two large packing-houses for fruit, warehouses for wool and grain, livery stables for hay, a flouring-mill for wheat, and railroad and river means of transportation.

The large land holdings are being broken into smaller tracts to encourage immigration and settlement. The outlook is most hopeful.

STATISTICS OF TEHAMA COUNTY, 1905-6.

General Statistics.	
Area, 3,200 square miles, or 2,048,000 acres.	
Number of farms	1,200
Number of acres assessed	1,237,462
Value of country real estate	$6,550,370
Of improvements thereon	$962,165
Of city and town lots	$555,745
Of improvements thereon	$1,030,985
Of personal property	$2,171,430
Total value of all property	$11,270,695
Number of miles of public roads	500
Expended on roads, last fiscal yr.	$22,398

General Statistics—Continued.	
Expended for bridges, last fiscal year	$5,135
Road levy per $100, 1906	35 cts.
Value of county buildings	$83,000
Irrigating ditches—miles, 350; cost	$52,500
Railroads, steam—miles, 57.81; assessed value	$1,247,205
Electric power lines—miles, 55½; assessed value	$20,250
Number of acres irrigated	10,260

STATISTICS OF TEHAMA COUNTY, 1905-6—Continued.

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	38,635	20,863	$500,709
Barley	29,865	17,919	358,380
Oats	2,300	1,242	33,534
Corn	150	126	3,150
Total cereals	70,950	40,150	$895,773
Alfalfa hay	1,370	6,850	$41,100
Grain hay	35,760	35,760	447,000
Total hay	37,130	42,610	$488,100

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	18,000	650	18,650
Apricot	62,400	2,010	64,410
Cherry	4,600	470	5,070
Fig	10,350	2,775	13,125
Lemon	585	200	785
Nectarine	200	------	200
Olive	12,000	55,460	67,460
Orange	7,870	4,910	12,780
Peach	607,250	72,150	679,400
Pear	49,860	13,190	63,050
Plum	7,000	------	7,000
Prune	93,495	10,650	104,145
Other kinds	9,935	1,720	11,655
Almond	34,325	970	35,295
Walnut	3,200	300	3,500
Total fruit trees	921,070	165,455	1,086,525
Raisin grapes (acres.)	175	------	175
Table grapes (acres.)	100	------	100
Wine grapes (acres.)	2,500	------	2,500
Total acres grapes	2,775	------	2,775
Blackberries (acres.)	24	------	24
Raspberries (acres.)	10	------	10
Strawberries (acres.)	50	------	50
Total acres berries	84	------	84

Livestock Industry.

	Number.	Value.
Cattle—Beef	74	$2,590
Stock	26,354	368,955
Thoroughbred	202	12,120
Dairy Cows—Devon	47	2,820
Herefords	75	4,500
Holsteins	80	4,800
Calves	6,520	39,120
Swine	7,288	21,865
Horses—		
Thoroughbred	20	8,150
Common	2,391	68,020
Colts	633	13,270
Mules	1,167	116,700
Sheep—		
Imported or fine	2,003	10,115
Common	224,387	448,775
Lambs	165,000	165,000
Common Goats	18,525	32,120
Total stock all kinds	454,766	$1,318,920
Wool (pounds)	1,277,190	$217,125
Mohair (pounds)	92,625	13,894

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	879,230	$10,980
Apricots	338,101	1,690
Blackberries	72,000	2,160
Beans	96,000	1,920
Beets	5,240	219
Cabbage	75,000	1,500
Celery	3,120	156
Corn	85,000	2,550
Figs	1,035,000	2,587
Grapes	16,050,000	96,300
Loganberries	1,000	100
Nectarines	31,957	479
Onions	126,000	1,260
Oranges (boxes)	850	1,275
Olives	163,250	4,897
Pears	1,622,504	16,225
Peaches	11,907,282	59,536
Peas	35,000	1,050
Plums	375,930	1,879
Irish potatoes	865,250	4,320
Sweet potatoes	275,500	2,755
Prunes	10,739,273	53,196
Quinces	2,000	40
Raspberries	5,000	400
Strawberries	60,000	4,200
Tomatoes	200,000	4,000
Total value		$275,674

Dried—	Pounds.	Value.
Almonds	69,621	$6,962
Apricots	35,443	2,381
Beans	130,000	3,250
Chestnuts	804	160
Corn	252,000	3,150
Figs	43,000	2,150
Nectarines	3,851	308
Onions	432,562	2,163
Pears	39,130	6,104
Peaches	2,039,822	142,787
Peanuts	4,000	200
Plums	92,350	3,694
Prunes	3,513,091	105,392
Raisins	8,500	512
Walnuts	1,125	140
Totals	6,665,299	$279,353

Wines, Brandies, Etc.

Number of wineries, 1; number of distilleries, 1.

	Gallons.	Value.
Wine—Angelica	34,820	$5,220
Muscatel	44,340	6,650
Port	379,280	56,800
Sherry	104,890	15,730
Totals	563,330	$84,400
Brandy	6,000	$2,000

Poultry and Eggs.

	Dozen.	Value.
Chickens	2,580	$10,320
Turkeys	1,856	55,680
Eggs	25,800	5,160
Total value		$71,160

STATISTICS OF TEHAMA COUNTY, 1905-6—Continued.

Fish Industry.

	Pounds.	Value.
Salmon	375,000	$18,750

Dairy Industry.

Creameries, 2.

	Pounds.	Value.
Butter	51,000	$10,200

Forest Products.

	Amount.	Value.
Area of timber lands (acres)	85,470	------
Sawmills (number)	2	------
Fuel, wood (cords)	6,000	$30,000
Lumber—Pine (feet)	12,987,000	389,610
Fir (feet)	3,465,000	69,300
Posts (pieces)	10,000	1,000
Railroad ties (pieces)	25,000	3,125
Sash and door factories (number)	1	100,000

Power used for mills and manufactories in county: steam—number, 4; electrical—number, 1.

Miscellaneous Products.

	Pounds.	Value.
Bees (hives)—No., 215	------	$215
Honey	6,420	513
Hops	237,033	28,443
Alfalfa seed	1,069	212
Sugar beets (tons)	840	4,200

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value. of Product.
Brick	1	7	700,000	$49,000
Cigars	2	6	220,000	11,367
Conf'tion'y (lbs.)	3	3	20,000	3,000
Flouring mills (barrels)	2	8	26,500	119,250
Foundries and iron w'ks (tons)	1	3	30	6,000
Hides		6	4,435	7,088
Lard (pounds)		3	9,500	3,950
Meat p'k'd (tons)		--	35	8,750
Tallow (barrels)		--	76	798
Pickled olives (gallons)		--	11,302	2,260
Planing mills—Sash and door (feet)	1	125	9,820,000	491,000
Granite (tons)	1	2	100	4,000
Marble (tons)	1	1	35	5,500

Productions Shipped Out of State.

	Amount.
Almonds	50,000 lbs.
Apricots, dried	35,443 lbs.
Nectarines, dried	3,851 lbs.
Peaches, dried	1,921,822 lbs.
Pears, dried	39,130 lbs.
Plums, dried	92,350 lbs.
Prunes, dried	513,091 lbs.
Hops	237,033 lbs.
Brandy	25,000 gals.
Wine, sweet	450,000 gals.
Lumber	1,050 M ft.

TRINITY COUNTY.

Trinity County is oblong in shape, its greatest length running north and south for 90 miles, while its width from east to west at its widest part will not exceed 55 miles. Mountain barriers inclose it on three sides. The entire surface is, in consequence, broken, rugged, and precipitous. To this formation the section is indebted for its abundant moisture, as it is watered by numerous streams, all having their sources in the county, and flowing eventually into the ocean. Trinity River, the largest of these, rises in the north, flows south for about 40 miles, and then turns sharply to the northwest, receiving in its course the waters of many tributaries. The southern part has also many streams, and is a mass of high, rugged mountains.

Weaverville, the county seat, has an altitude of 2,000 feet, and its climate differs little from that of other places similarly located. Owing to the altitude of the county, the atmosphere is dry and pure, and the extremes of heat and cold do not cause so much discomfort as they would in less elevated regions.

Trinity is essentially a mining county, and but little attention has been paid to agriculture. Some fruit is grown for home consumption, and apples, pears, and plums do well. Berries of all kinds thrive and yield abundantly.

While it is not a fruit-growing county, along the streams and rivers, in the mining towns, and on stock ranches, are small family orchards, the chief of which are at Weaverville, Junction City, and vicinity. The apples raised are choice, and other fruits are of excellent flavor.

The area of agricultural lands under cultivation is small, the principal products being barley, oats, and wheat. Vegetables are raised for consumption in the towns and mining camps.

Nature has been most lavish in her bestowal of natural resources upon this region. A temperate climate; hills stocked with game; streams supplied with trout; mountainsides ribbed with veins of metal-bearing ores; hills, river bars, and benches covered with auriferous gravels; mountain scenery unsurpassed for beauty and grandeur; springs of pure, cold water; streams of heavy grade, with abundance of water for mining, irrigation, domestic and power purposes; forests of pine and spruce and sugar pine; stock ranges covered with abundant crops of natural grasses; agricultural lands capable, with moderate irrigation, of producing all the varieties of fruit, grass, grain, and berry of temperate climes—such are some of the gifts of nature in this section.

The industry first in importance and opportunity in Trinity County is that of gold mining in its various branches—hydraulic, quartz, and dredge. With all the mines in operation, but a small portion of the auriferous gravel has so far been worked. For the comparatively new industry of dredge mining, because of its large river bars and numerous facilities for obtaining electric power, the county offers splendid oppor-

tunities. That the river bars have the necessary values, and that they can be so worked, have been demonstrated.

In quartz mining the county offers equally as good opportunities as in placer mining. Though quartz mining is an industry which was not prosecuted in Trinity until about 1880, since that time it has been constantly followed, with most profitable results, in nearly every section. There are numerous bodies of comparatively low-grade ores which would be opened up and worked if the county had communication by rail with outside points.

Besides gold, copper, iron, platinum, quicksilver, coal, iridium, and asbestos have been found at various places; but with the exception of quicksilver, none of these metals has received much attention. The copper prospects show large deposits of that metal. The finds of platinum have been frequent, and probably would rouse more interest if miners generally knew this metal was as valuable as gold and could be saved by similar methods.

The soil, with moderate irrigation, produces splendid crops of alfalfa and red clover, and fits the county for an industry badly needed—that of the dairy and creamery. With a splendid home market for butter, cheese, ham, bacon, and lard, it is strange that this industry has not been vigorously prosecuted, for certainly there are some splendid opportunities.

Stock-raising has been, and always will be, a leading business. Fine open ranges and an abundance of water are in every part. Though feeding is sometimes required in the winter, many of the stockmen avoid this by driving their stock to the Sacramento Valley and pasturing there.

Though covered with magnificent forests of pine, spruce, and sugar pine, no use has yet been made of the timber resources beyond the supplying of home demand. In present conditions not much development of the lumber industry can be looked for until the construction of a railroad into the county.

Communication by steam or electric railroad with Humboldt Bay and the Sacramento Valley is the greatest necessity required for the development of Trinity County and its resources.

STATISTICS OF TRINITY COUNTY, 1905-6.

General Statistics.

Area, 3,000 square miles, or 1,920,000 acres.	
Number of farms	260
Number of acres assessed	600,000
Value of country real estate	$2,000,000
Of improvements thereon	$250,000
Of city and town lots	$30,000
Of improvements thereon	$85,000
Of personal property	$350,000
Total value of all property	$2,715,000
Expended on roads, last fiscal yr.	$6,132
Expended for bridges, last fiscal year	$11,356
Number of miles of public roads	250
Road levy per $100, 1906	40 cts.
Value of county buildings	$20,000
Irrigating ditches—miles, 200; cost	$20,000
Mining ditches—miles, 500; cost	$1,000,000
Electric power plants—7; assessed value	$32,060
Number of acres irrigated	4,000

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	1,000	500	$6,250
Barley	50	20	425
Oats	200	100	2,500
Corn	200	50	1,000
Total cereals	1,450	670	$10,175
Alfalfa hay	1,000	5,000	$10,000
Grain hay	1,000	2,000	5,000
Grass hay	3,000	6,000	12,000
Total hay	5,000	13,000	$27,000

Dairy Industry.

	Production.	Value.
Butter (pounds)	50,000	$12,500

STATISTICS OF TRINITY COUNTY, 1905-6—Continued.

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	5,000	2,000	7,000
Apricot	30	10	40
Cherry	500	100	600
Fig	15	10	25
Nectarine	10	------	10
Olive	2	3	5
Peach	1,500	300	1,800
Pear	600	150	750
Plum	500	100	600
Prune	800	100	900
Quince	50	10	60
Almond	15	10	25
Chestnut	50	10	60
Pecan	2	------	2
Walnut	200	35	235
Hickory	------	3	3
Total acres grapes	20	------	20
Blackberries (acres.)	30	------	30
Currants (acres.)	2	------	2
Gooseberries (acres.)	3	------	3
Raspberries (acres.)	20	------	20
Strawberr'es (acres.)	20	------	20
Total berries	75	------	75

Livestock Industry.

	Number.	Value.
Cattle—Beef	1,000	$30,000
Stock	20,000	300,000
Thoroughbred	50	5,000
Dairy Cows—Graded	400	16,000
Calves	2,000	10,000
Swine	2,500	12,500
Horses—		
Thoroughbred	3	750
Standard-bred	50	10,000
Common	2,500	125,000

Livestock Industry—Continued.

	Number.	Value.
Colts	300	$3,000
Mules	300	18,000
Sheep—Common	2,400	9,600
Lambs	1,000	1,000
Common Goats	245	525
Total stock all kinds	32,348	$523,375

Poultry and Eggs.

	Dozen.	Value.
Chickens	500	$2,500
Ducks	5	25
Geese	5	40
Turkeys	100	1,200
Total value		$3,765

Forest Products.

	Amount.	Value.
Area of timber lands (acres)	1,000,000	--------
Cedar (acres)	5,000	--------
Pine (acres)	300,000	--------
Fir (acres)	500,000	--------
Sawmills (number)	20	$20,000
Fuel, wood (cords)	10,000	40,000
Lumber—Pine (feet)	2,000,000	40,000
Fir (feet)	2,000,000	40,000
Posts (pieces)	5,000	500
Mine timbers (feet)	300,000	7,000
Shakes (thousand)	20,000	200
Total value		$147,700

Power used for mills and manufactories in county: steam—number, 10 sawmills; electrical—number, 2; water—number, 10 sawmills; 25 quartz mills—2 electric power, 10 steam power, 13 water power.

TULARE COUNTY.

Tulare County, out of which three or four valley counties have been carved, is still one of the largest. It is about the size of Connecticut, and is almost square. It is remarkable for the height and beauty of its mountains, for its enormous groves of giant sequoia, for the fertility of its soils, for the abundance of watercourses, for the variety of products, for scenery that many declare to be superior to the Yosemite, for the highest mountain (Mount Whitney) in the United States on its eastern border, for the successful citrus territory, where are grown oranges that equal the finest produced, and for being the earliest section to be settled up and devoted to agricultural purposes. It is one of the greatest stock-raising counties. Cattle are raised for meat rather than for dairying, although the latter industry is keeping pace. The glory of Tulare is its deciduous fruit orchards, all along the channels of the Kaweah and Tule rivers. The soil is a deep alluvial loam, rich in nitrates and potash, and free from alkali.

Late frosts are rare. The spring is warm and early, which gives the fruit a perfect richness and sweetness.

While irrigation is general, at least to the extent of giving the trees one good drenching a year, there are many ranches where the underflow is only 6 to 12 feet from the surface, rising even higher in spring, and therefore no artificial watering is needed.

The principal town and the county seat is Visalia. It is the oldest city in the valley, having been founded in 1852 by the brothers Vice, for whom it was named. It is a modern, well-improved, prosperous city, with every prospect of continuous active growth. In the old days it was the starting point of the overland stage, and to-day it is said of Visalia that it represents more per capita wealth than any other city of like population. Visalia is midway between San Francisco and Los Angeles, but it was not until 1897 that it was connected with the main lines of the railroad. Electric power is supplied from a mountain watercourse.

Tulare City is the second in point of size; it is about 10 miles south of Visalia. The main line of the Southern Pacific, and the Tulare-Visalia line of the Santa Fé, pass through the city. In the surrounding country, cattle, hogs, and horses are raised, and there are flourishing orchards and broad wheat and alfalfa fields. It has substantial brick buildings, on broad, beautiful streets.

The famed citrus belt of Tulare lies about 12 miles east of Visalia, and includes a series of settlements, or districts, chief of which are Lindsay, Exeter, and Porterville. This land is practically frostless. The soil is known to contain in exact proportions the elements needed for the growth of citrus trees. Freedom from fog gives immunity from insect pests, which need moisture in the air to prosper. The long, warm summer brings the fruit to maturity earlier than is the case farther south, and as a result Tulare fruit reaches the Eastern market in November and the first weeks of December, in time for the Christmas trade.

Most of the district has a plentiful supply of water in the form of an

underflow—a natural reservoir at a depth of from 50 to 75 feet. It is raised by pumping. Formerly the pumps were operated by gasoline, but electricity is now available at a reasonable price. Farm houses are lighted by electricity, and the cities of Visalia and Tulare and the towns of Exeter, Lindsay, and Porterville are supplied from the same plant.

The Porterville oranges have repeatedly carried off first prizes in the citrus fairs of the State.

In the Alta district, in the northwestern part, a considerable acreage is devoted to raisins, which do well in this county, although their cultivation has not been attempted on so extensive a scale as elsewhere.

Situated midway between the cities of Los Angeles and San Francisco, the dairyman is enabled to take advantage of varying market conditions to secure the highest prices. There has been a marked increase in the dairy interests. Another noticeable gain was made in horses and mules. There is a growing demand for draft-horses and large-boned, big-muscled mules, and these animals command good prices.

Soil and climate are generally adapted to diverse products. A crop of grain hay may be cut in May, and a harvest of potatoes, squashes, Indian or Egyptian corn taken from the same field in October. Alfalfa is one of the best honey plants. It supplies poultry with green feed the entire year. Its succulent shoots promote the rapid growth of young pigs and calves. The problem of meeting bills does not confront the diversified farmer. He has always something to sell. There is no waste. The hog gets what the reaper overlooks. The chicken in turn finds what the pig misses. A vast saving in labor is effected. With the aid of his family, daily tasks, trivial in themselves, accumulate in results that materially swell the income. Nor is there either drudgery or monotony on a farm of this kind. Varied interests and changing occupations give zest to life and rob labor of its burdens.

Alfalfa hay has a broad market for shipment. Squashes, onions, and beans command good prices. Honey has an unlimited market, it being shipped East in carload lots. Poultry and eggs are higher than in the East, and their production cheaper. Berries of all kinds thrive, and meet with a ready demand in the local market.

STATISTICS OF TULARE COUNTY, 1905-6.

General Statistics.

Area, 4,863 square miles, or 3,112,320 acres	
Number of farms	5,000
Number of acres assessed	1,389,083
Value of country real estate	$9,360,565
Of improvements thereon	$2,028,405
Of city and town lots	$875,149
Of improvements thereon	$1,382,920
Of personal property	$2,474,416
Total value of all property	$19,555,406
Expended on roads and bridges, last fiscal year	$57,953
Number of miles of public road	1,837
Road levy per $100, 1906	40 cts.
Value of county buildings	$144,000
Irrigating ditches—miles, 658; cost	$900,000
Railroads, steam—miles, 202; assessed value	$3,289,516
Electric power plants—1; assessed value	$64,000
Electric power lines—miles, 163; assessed value	$41,750
Number of acres irrigated	151,378

Wines, Brandies, Etc.

Number of wineries, 5; number of breweries, 2.

	Gallons.	Value.
Wine—Angelica	120,200	$48,080
Claret	5,150	1,380
Muscatel	50,000	15,000
Port	261,950	91,750
Riesling	200	50
Sherry	260,100	78,650
Totals	697,600	$234,910
Brandy	50,000	$39,000
Vinegar	300	75

Dairy Industry.

	Production.	Value.
Creameries, 4.		
Butter (pounds)	2,699,340	$702,385
Cheese (pounds)	82,400	8,240
Cream (gallon)	37,000	14,600

STATISTICS OF TULARE COUNTY, 1905-6—Continued.

Cereal Products and Hay.

	Acres.	Tons of 2,000 pounds. Tons.	Value.
Wheat	128,982	64,712	$1,389,440
Barley	32,641	14,331	289,220
Oats	2,902	1,484	29,683
Corn	9,614	6,373	127,460
Total cereals	174,139	86,900	$1,835,803
Alfalfa hay	29,927	81,579	$356,480
Grain hay	35,945	44,122	278,143
Grass hay	2,720	2,960	14,450
Total hay	68,592	128,661	$649,073

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	24,256	11,380	35,636
Apricot	61,426	6,740	68,166
Cherry	90	485	575
Fig	9,363	14,769	24,132
Lemon	39,824	2,563	42,387
Nectarine	6,890	840	7,730
Olive	5,201	2,076	7,277
Orange	460,280	590,022	1,050,302
Peach	433,891	433,499	867,390
Pear	17,656	5,862	23,518
Plum	13,354	13,761	27,115
Prune	272,896	5,403	278,301
Quince	102	242	344
Other kinds	740	1,060	1,800
Almond	3,605	624	4,229
Chestnut	------	170	170
Pecan	------	20	20
Walnut	674	367	1,041
Grape-fruit	3,710	1,150	4,860
Limes	10	200	210
Total fruit trees	1,353,970	1,091,233	2,445,203
Raisin grapes (acres.)	7,816	3,395	11,211
Table grapes (acres.)	527	766	1,293
Wine grapes (acres.)	939	201	1,140
Total acres grapes	9,282	4,362	13,644
Blackberries (acres.)	36	2	38
Gooseberries (acres.)	2	--	2
Loganberries (acres.)	10	4	14
Raspberries (acres.)	4	--	4
Strawberries (acres.)	11	--	11
Total acres berries	63	6	69

Fruit, Vegetables, Etc.

Green—	Total Production. Pounds.	Value.
Apples	1,338,760	$19,355
Apricots	423,460	9,917
Blackberries	45,600	1,400
Beans	20,000	460
Beets	11,864,000	26,689
Cabbage	28,000	340
Corn	6,000	120
Cherries	1,500	50
Grapes	23,413,000	176,970
Grape-fruit	11,260	22,620
Limes (boxes)	25	100

Fruit, Vegetables, Etc.—Continued.

Green—	Total Production, Pounds.	Value.
Lemons (boxes)	72,154	$120,175
Loganberries	22,050	1,170
Nectarines	36,385	740
Onions	9,550	237
Oranges (boxes)	592,422	822,205
Olives	30,000	460
Pears	140,210	2,665
Peaches	15,875,411	158,754
Peas	80,000	1,200
Plums	1,162,360	10,100
Irish potatoes	2,129,965	21,344
Sweet potatoes	136,500	1,675
Prunes	7,899,000	69,350
Quinces	750	15
Raspberries	6,125	490
Strawberries	29,800	1,590
Tomatoes	93,000	930
Total value		$1,471,121

Dried—	Pounds.	Value.
Almonds	23,760	$2,714
Apricots	470,500	62,460
Beans	49,200	1,518
Figs	548,200	13,130
Nectarines	34,500	2,120
Peaches	2,769,650	141,405
Peas	305,500	3,055
Plums	2,550	215
Prunes	9,611,500	223,734
Raisins	6,093,300	262,360
Walnuts	8,970	835
Totals	20,517,630	$713,546

Livestock Industry.

	Number.	Value.
Cattle—Beef	16,912	$475,904
Stock	60,501	968,440
Dairy Cows—Graded	12,504	425,654
Herefords	178	6,310
Holsteins	281	10,180
Jersey	243	3,490
Polled Angus	75	4,320
Shorthorns	712	22,500
Calves	25,782	113,903
Swine	36,332	209,024
Horses—		
Thoroughbred	12	13,500
Standard-bred	94	32,800
Common	12,812	905,125
Colts	2,257	37,985
Mules	2,688	268,800
Sheep—		
Imported or fine	1,930	13,800
Common	44,314	160,456
Lambs	19,666	52,898
Angora Goats	1,010	3,855
Common Goats	704	1,155
Wool (pounds)	405,170	51,728

Miscellaneous Products.

	Pounds.	Value.
Bees (hives)—No., 2,504.		
Beeswax	1,250	$313
Honey	94,364	4,756
Alfalfa seed	180,830	18,083
Sugar beets (tons)	10,000	45,000

STATISTICS OF TULARE COUNTY, 1905-6—Continued.

Poultry and Eggs.

	Dozen.	Value.
Chickens	13,974	$58,470
Ducks	221	1,253
Geese	96	1,020
Turkeys	920	10,101
Eggs	746,452	129,467
Total value		$200,311

Forest Products.

		Amount.	Value.
Area of timber lands	acres.	191,320	$3,826,400
Cedar	acres.	2,750	------
Pine	acres.	2,580	------
Redwood	acres.	13,450	------
Sawmills (number)		5	21,300
Fuel, wood (cords)		15,083	49,909
Lumber—Cedar (feet)		501,000	4,125
Pine (feet)		815,000	15,300
Redwood (feet)		2,075,000	41,500
Posts (pieces)		17,950	1,110
Sash and door factories (number)		65	------
Shakes (thousand)		20	325
Shingles (thousand)		------	50
Total value			$3,960,019

Power used for mills and manufactories in county: Steam—1,419 horse power; electrical—1,492 horse power; water—205 horse power; gasoline—8,955 horse power.

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value of Product.
Flouring mills (barrels)	2	9	21,000	$100,000
Furniture	1	5	------	10,000
Hides		8	3,750	7,537
Tallow (barrels)		----	41	492
Olive oil (gals.)		----	750	1,500
Pickled olives (gallons)		----	2,610	1,626
Visalia soda wks.		----	------	5,000
Visalia ice wks.		----	------	6,000

Productions Shipped Out of State.

	Amount.
Apricots, dried	21,550 lbs.
Figs, dried	54,700 lbs.
Grape-fruit	7,745 boxes
Grapes, fresh	152,500 lbs.
Lemons	30,115 boxes
Limes	43,000 boxes
Oranges	447,486 boxes
Peaches, dried	584,460 lbs.
Plums, dried	2,000 lbs.
Prunes, dried	445,000 lbs.
Raisins	850,000 lbs.
Wine, sweet	187,300 gals.

TUOLUMNE COUNTY.

Tuolumne County is in Central California, and is known as the Southern Mines. It is 150 miles nearly due east from San Francisco, and varies in width from 8 to 12 miles. The eastern portion extends into the western slope of the Sierra Nevada range. The entire surface is of a rugged character, with many small and fertile valleys and meadows, and sloping hills heavily covered with timber.

The county seat is Sonora, on the line of the railroad, and in about the center of the county.

The Sierra Railway connects at Oakdale with the line of the Southern Pacific, extending thence 53 miles in an easterly direction to Tuolumne, at which point junction is made with the Hetch-Hetchy & Yosemite Valley Railroad, which reaches into the high Sierras, tapping the vast timber belt, and affording transportation for lumber and mining material. The railroad passes through all the large towns of the county, and makes stage connections for outlying places.

Tuolumne County has made some wonderful strides during the last few years. While the railroad has worked a hardship to some of our towns, by shutting off staging and teaming, it has been the means of bringing in many people who never would have come if compelled to travel by stage. The population has increased, the assessment roll is larger, mining machinery can be placed at the mine for less cost, and every point can be reached within twelve hours' ride from San Francisco.

The scenery is unsurpassed. The streams afford pleasure to the sportsman equal to any place in the State.

During recent years the mining industry has been steadily on the improve. While mining is the greatest factor, the timber industry is fast coming to the front. The town of Tuolumne was laid out by the West Side Flume and Lumber Company in 1899. Since then it has installed a large sawmill plant. It has a box factory, a fine hotel, a large general store with offices overhead, and its lumber yards cover a large area. It has a narrow-gauge railroad which extends into the heavily timbered mountains. Logs are placed on flat cars, and hauled to the sawmill. This town is but a quarter of a mile west of the old town of Carters, and both are surrounded by producing mines.

Some of the greatest producing mines in the State are located in Tuolumne County.

The timber belt is great in dimensions, comprising 60 per cent sugar pine, 20 per cent yellow pine, and the balance cedar and fir.

The famous Mother Lode traverses the entire western portion of the county. The foot wall of the Mother Lode is serpentine, with eruptive dikes accompanying, while mineralized slate forms the hanging wall. All east of the Mother Lode is what is known as the East Belt, upon which are situated many fine producing mines, together with prospects held under possessory title. The East Belt has made quite a record, and is the principal mining section of the Southern Mines. The following list shows some of the metals found in Tuolumne County: Gold,

silver, copper, arsenic, antimony, galena, zinc, iron, amphibolite, obsidian, asbestos, manganese, corundum, barite, and marble.

The main rivers are the Stanislaus and Tuolumne, tributaries of the San Joaquin. The Tuolumne has its source entirely within the limits of the county, and may be termed the river of a thousand lakelets, although a number of these strictly come under the head of lakes. The main or principal branch of the river flows through the Hetch-Hetchy Valley. This branch, with its many tributaries, commands about three fourths of the watershed of the county. The Stanislaus River, to the north, with one of its branches, forms the boundary line of this county and Calaveras.

The water supply is ample for all requirements, being used for mining and irrigation. It is furnished by a system of dams, reservoirs, and canals.

Four miles east of Sonora is Phœnix Lake, which is the lower distributing point, covering Sonora district and the Mother Lode. At Phœnix Lake is an electric power plant, which supplies power and lights to all the principal mines upon the Mother Lode. The towns of the county are furnished with electric lights from power generated by a plant situate upon the south fork of the Stanislaus River.

In many places the soil is admirably adapted to fruit-growing, and in the foothills some of the finest apples in the State are grown. Semi-tropical fruits of every variety and vines are cultivated, and yield an abundance of highly flavored fruit. The almond and walnut are cultivated with encouraging results. Lemon and orange trees do well in the southern portion.

Large quantities of grapes are shipped each year, while the second class is made into wine of good quality.

The sunny, sheltered hillsides of Tuolumne County offer inducements for the culture of fruits. With the present system of water ditches, land can easily be irrigated.

Most of the stock-raisers produce sufficient hay for their own use, and considerable is raised upon small farms, also. Little, if any, is shipped out of the county. Stock-raising is controlled mostly by feed—by those who have ranges in the mountains for summer, and pastures in the foothills for winter. In the mountains in certain sections there are meadows upon which grows the finest kind of bunch grass, while upon the hillsides wild oats and timothy afford a splendid feed.

The principal towns are: Sonora (county seat), situate about the center of the county. It has an elevation of about 1,825 feet, and is considered an exceptionally good business town. There is a courthouse, absolutely fireproof, and even age can not impair it. Columbia is 4 miles to the north of Sonora. It is one of California's famous mining camps of early days. Tuolumne and Carters lie 10 miles east of the county seat, and are situate in the center of the wonderful East Belt mining district, and have an exceptionally bright future, being the terminus of the Sierra Railway, and the junction of the Hetch-Hetchy & Yosemite Valley Railroad; also the headquarters of the West Side Flume and Lumber Company.

SOME RECENT TUOLUMNE ENTERPRISES.

An irrigation system—series of dams and ditches, etc.—is in course of construction, to be completed in 1908, at an approximate cost of

$2,000,000. It will develop a flow of 3,500 inches of water in the dry season, and will furnish water to irrigate 45,000 acres for fruit-raising.

There is an electric power plant of 27,000 horse-power capacity in course of construction at Sublett's Bar, to be completed in 1908.

An irrigation system south of Tuolumne River, in the vicinity of Groveland, has developed a flow of 1,700 inches of water, and at present can irrigate about 18,000 acres. When completely developed the flow will be 3,000 inches.

Two new marble quarries have been opened. In the Bruce Quarry machinery has been installed, and they are ready to commence operations; will employ 18 men; power, steam; contemplate changing to electricity. The Baxter Quarry has machinery on the ground ready to install; will employ 10 men; power will be electricity. All three quarries of this county are within a radius of 2½ miles of the town of Columbia. The marble is very similar to that from the famous Carrara ledge; it can hardly be distinguished by experts.

An ice plant was completed at Sonora in November, 1906; capacity, 18 tons in twenty-four hours; power, steam; 4 employés.

No one yet has engaged in the poultry business, excepting on a small scale. We do not supply one half of the local demand; about seventy-five per cent of our eggs are imported. Present price: Chickens, $9 per dozen; eggs, 45 cents per dozen.

The Sonora Abstract and Trust Company is preparing the first official map of Tuolumne County. The map will show all present owners of lands and mines; also all roads, trails, rivers, ditches, reservoirs (both proposed and in use), topography, and forest reserves. It will be lithographed in two colors. Price per copy will be $10.

STATISTICS OF TUOLUMNE COUNTY, 1905-6.

General Statistics.

Area, 1,518,000 acres.	
Number of farms	359
Number of acres assessed	421,782
Value of country real estate	$3,703,260
Of improvements thereon	$1,718,515
Of city and town lots	$264,105
Of improvements thereon	$524,505
Of personal property	$831,895
Of railroads	$389,920
Total value of all property	$7,432,200
Expended on roads, last fiscal yr.	$27,507
Expended for bridges, last fiscal year	$10,285
Number of miles of public roads	426
Road levy per $100, 1906	31 cts.
Value of county buildings	$123,800
Irrigating ditches—miles, 206; cost	$1,042,500
Railroads, steam—miles, 74.74; assessed value	$444,920
Electric power plants, 2; assessed value	$114,500

Poultry and Eggs.

	Dozen.	Value.
Chickens	3,140	$21,980
Ducks	55	385
Geese	18	270
Turkeys	275	6,875
Eggs	116,000	29,000
Total value		$58,510

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	196	73	$3,139
Barley	42	26	838
Oats	228	114	3,990
Corn	12	5	138
Total cereals	478	218	$8,105
Alfalfa hay	415	1,215	$19,440
Grain hay	8,700	11,682	151,866
Grass hay	265	187	1,683
Total hay	9,380	13,084	$172,989

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	15,495	10,719	26,214
Apricot	276	141	417
Cherry	318	152	470
Fig	769	78	847
Lemon	5	------	5
Nectarine	21	------	21
Olive	39	308	347
Orange	302	92	394
Peach	7,638	2,219	9,857
Pear	2,187	182	2,369
Plum	2,518	316	2,834
Prune	146	172	318
Quince	253	57	310
Almond	183	79	262

STATISTICS OF TUOLUMNE COUNTY, 1905-6—Continued.

Fruit Trees and Vines—Continued.

		Bearing.	Non-Bearing.	Total.
Chestnut		97	27	124
Walnut		765	571	1,336
Hickory		14	------	14
Total fruit trees		31,026	15,113	46,139
Table grapes	acres.	26	------	26
Wine grapes	acres.	238	27	265
Total acres grapes		264	27	291
Blackberries	acres.	18	------	18
Currants	acres.	2	------	2
Loganberries	acres.	2	------	2
Raspberries	acres.	4	------	4
Strawberries	acres.	12	------	12
Total acres berries		38	------	38

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	1,318,400	$29,664
Apricots	14,250	285
Asparagus	1,200	96
Blackberries	45,600	2,736
Beans	31,500	708
Beets	18,000	360
Cabbage	92,500	1,850
Celery	6,500	200
Cauliflower	1,450	45
Corn	125,400	1,865
Currants	3,400	275
Cherries	12,500	1,000
Figs	84,050	2,521
Gooseberries	600	42
Grapes	924,000	6,328
Loganberries	3,400	306
Onions	105,500	2,100
Oranges (boxes)	275	350
Pears	185,000	2,775
Peaches	328,000	6,560
Peas	8,000	320
Plums	60,000	900
Irish potatoes	925,000	18,565
Sweet potatoes	9,500	285
Prunes	2,600	55
Quinces	16,000	320
Raspberries	4,550	455
Strawberries	26,000	2,600
Tomatoes	122,000	2,745
Total value		$86,311

Dried—	Pounds.	Value.
Figs	3,200	$96
Onions	18,000	360
Pears	4,300	172
Peaches	12,000	1,200
Plums	6,000	360
Walnuts	28,000	2,970
Totals	71,500	$5,158

Wines, Brandies, Etc.

	Gallons.	Value.
Wine—Claret	15,700	$3,925
Port	185	93
Riesling	1,380	345
Sherry	340	170
Totals	17,605	$4,533
Beer (barrels)	704	$8,448
Brandy	700	1,750
Cider	54,200	10,840
Vinegar	2,280	570

Livestock Industry.

	Number.	Value.
Cattle—Beef	2,908	$87,240
Stock	13,617	224,680
Thoroughbred	5	800
Dairy Cows—Graded	1,070	37,450
Herefords	4	300
Holsteins	6	510
Jersey	12	1,125
Shorthorns	5	450
Calves	5,470	49,230
Swine	3,685	26,716
Horses—		
Thoroughbred	41	8,200
Common	3,612	198,660
Colts	363	5,445
Mules	154	12,320
Sheep—Common	1,470	5,880
Lambs	82	164
Common Goats	1,205	2,710
Total stock all kinds	33,709	$661,880
Wool (pounds)	1,400	$200

Forest Products.

		Amount.	Value.
Area of timber lands	acres.	275,000	------
Cedar	acres.	27,500	----
Pine	acres.	247,500	------
Sawmills (number)		7	$168,500
Charcoal (sacks)		7,250	5,075
Fuel, wood (cords)		10,800	54,000
Laths (thousand)		5,600	7,000
Lumber—Cedar (feet)		812,000	8,932
Pine (feet)		48,500,000	1,212,500
Posts (pieces)		9,500	760
Sash and door factories (number)		1	125,000
Shakes (thousand)		1,250	12,500
Shingles (thousand)		450	1,800
Total value			$1,596,067

Power for mills and manufactories in county: steam—number, 7.

Miscellaneous Products.

	Pounds.	Value.
Bees (hives)—No., 618		
Beeswax	600	$150
Honey	9,700	970

STATISTICS OF TUOLUMNE COUNTY, 1905-6—Continued.

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value of Product.
Wood boxes	2	46	7,510,000	$125,000
Brick		--	300,000	2,700
Cigars	2	6	246,000	12,300
Confectionery (pounds)	2	2	2,680	$1,700
Foundries, iron works (tons)	3	10	174	14,790
Lime (barrels)	1	14	75,020	140,000

Manufactories—Continued.

	No.	No. of Employés.	Quantity Produced.	Value of Product.
Machinery	3	--	------	$16,500
Malt (tons)	1	--	28	1,400
Pickles (gals.)		--	1,200	540
Planing mills	1	124	------	280,000
Marble (tons)	1	12	3,120	37,000

The exports of lumber for the year were 23,000,000 feet.

VENTURA COUNTY.

Ventura County, one of the smallest of the group of seven southern counties, lies between Santa Barbara County on the north and west, and Los Angeles County on the south and east, on the shores of the Santa Barbara channel. The county is triangular in shape, one face of the triangle, full 50 miles, fronting the ocean.

Of its area of 1,852 square miles, less than one fourth is under cultivation. Back from the coast in all directions rise rugged mountain ranges whose hearts are pierced in every direction with cañons and valleys of varying width. The entire northern section of the county is mountainous, but between the ranges here and there are to be found little valleys whose soil is the most productive in the world.

The mountain watersheds supply innumerable streams which, flowing in different directions, form the two principal rivers of the county, from which is obtained a vast quantity of water for irrigation. These two rivers, the Santa Clara and the San Buenaventura, rise in these northern mountains, their sources being separated but a few miles. The Piru River, the Sespe, and the Santa Paula, each of considerable length from its winding through the mountain gorges and cañons, flow into and form the Santa Clara River, which enters the county on the southeastern border, and flows in a generally western direction straight across to the sea. This is a stretch of nearly 40 miles, and the stream, with its feeders north and south, becomes the life blood, as it were, of a magnificent valley covering the southern portion of the county from east to west. Beginning on the east with a width of 2 or 3 miles, the valley gradually widens until its western breadth along the seashore is about 20 miles. The valley is broken by detached mountain ridges, whose living streams not only aid in producing the inexhaustible water supply and enhance the fertility of the soil, but afford the finest scenery and most desirable health-resorts.

The San Buenaventura River rises in the mountains in the northern part of the county, flows south, and enters the Pacific within 6 miles of the mouth of the Santa Clara.

The lower part of the Santa Clara Valley is a vast plain, 20 miles or more in width, extending back from the ocean in a great crescent, whose greatest distance is 10 miles from the shore. This plain for countless ages has been receiving the alluvial deposits brought down by the streams from the hills and mountains. It is the garden spot of the county, one of the most fertile tracts of land in the world, producing annually hundreds of thousands of dollars' worth of produce. Every variety of plant life does well in this section, but so well adapted is the soil to beans and beets that these are the staples.

Other products of the county—products in which it ranks with the leading counties in the State—are apricots, walnuts, lemons, and oranges, the yield of each of which is enormous. Not alone does the

county boast the largest lima bean ranches, but also the most extensive walnut grove, and the largest single lemon ranch.

Its mountain slopes are covered with verdure, and in its mountain valleys are many apiaries. In a good year a vast amount of honey is produced, netting big returns to the apiarist.

The narrow stretch of coast from southern Santa Barbara County, through Ventura County and including the northern portion of Los Angeles County, is the only section in the world producing lima beans, and Ventura County is the greatest bean-producing section in the world. This season 700,000 80-pound sacks of lima beans and 30,000 sacks of small beans were produced, bringing to the farmers more than $2,000,000.

The sugar-beet thrives in this great valley, and the percentage of sugar is greater here than in any other section in the world. The culture of sugar beets supports the Oxnard sugar factory, the second largest in the world, with a capacity of 2,000 tons per day.

Many herds of cattle and sheep are to be found in the mountain sections, and stock-raising is an important industry.

The county was the pioneer oil producer in this State, and its production of petroleum is still large.

The mountains are rich in mineral wealth, the production during the past year amounting to $335,000, divided as follows:

	Quantity.	Value.
Asphalt	3,000 tons	$30,000
Clay	30 tons	45
Gold	----	1,200
Natural gas	3,831 M cu. ft.	5,000
Petroleum	375,522 bbls.	236,578
Rubble	142,150 tons	60,490
Sandstone	2,300 cu. ft.	1,380
Total value		$334,693

STATISTICS OF VENTURA COUNTY, 1905-6.

General Statistics.

Area, 1,852.66 square miles, or acres.	1,185,704.95
Number of acres assessed	575,143
Value of country real estate	$5,423,927 00
Of improvements thereon	$706,095 00
Of city and town lots	$712,151 00
Of improvements thereon	$654,010 00
Of personal property	$1,933,762 00
Total value of all property	$9,429,945 00
Expended on roads, last fiscal year	$45,794 84
Expended for bridges, last fiscal year	$3,378 31
Number of miles of public roads	586
Road levy per $100, 1906	40 cts.
Value of county buildings	$112,000 00
Irrigating ditches—miles, 54½; cost	$92,600 00
Railr'ds, steam—miles, 198.32; assessed value	$1,761,303 00
Electric power plants—3; assessed value	$75,584 00
Number of acres irrigated	115,482

Poultry and Eggs.

	Dozen.	Value.
Eggs	158,400	$31,680

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	9,000	1,600	10,600
Apricot	65,000	24,230	89,230
Cherry	1,500	------	1,500
Fig	2,500	1,000	3,500
Lemon	57,000	48,000	105,000
Nectarine	550	------	550
Olive	31,740	------	31,740
Orange	85,000	21,240	106,240
Peach	5,970	300	6,270
Pear	600	------	600
Plum	650	------	650
Prune	21,680	------	21,680
Quince	150	------	150
Other kinds	1,500	------	1,500
Almond	12,870	------	12,870
Walnut	92,650	65,000	157,650
Total fruit trees	388,360	161,370	549,730
Table grapes—acres	173	15	188
Blackberries (acres)	12	----	12
Loganberries (acres)	16	----	16
Strawberries (acres)	15	----	15
Total acres berries	43	----	43

STATISTICS OF VENTURA COUNTY, 1905-6—Continued.

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	12,840	17,500	$402,500
Barley	33,270	25,000	720,000
Oats	6,500	2,250	60,750
Corn	2,800	750	18,750
Total cereals	55,410	45,500	$1,202,000
Alfalfa hay	------	1,000	$10,000
Grain hay	22,570	30,000	360,000
Total hay	22,570	31,000	$370,000

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	400,000	$4,000
Beets	364,000,000	950,000
Cabbage	4,000,000	30,000
Figs	4,400	88
Grape-fruit	28,800	960
Lemons (boxes)	119,200	350,000
Loganberries	75,000	4,200
Oranges (boxes)	167,040	309,024
Olives	2,000,000	30,000
Irish potatoes	375,000	7,500
Sweet potatoes	8,400	252
Strawberries	15,000	1,500
Dried—	Pounds.	Value.
Almonds	2,000	$150
Apricots	840,000	121,800
Beans, Lima	56,000,000	1,960,000
Beans, others	2,805,000	84,000
Onions	225,000	2,700
Prunes	300,000	------
Walnuts	2,300,000	230,000

Livestock Industry.

	Number.	Value.
Cattle—Beef	3,000	$90,000
Stock	11,236	202,240
Thoroughbred	200	8,000
Dairy Cows—Red Polled	100	4,000
Calves	3,000	21,000
Swine	------	8,700
Horses—Standard-bred	20	3,550
Common	5,380	215,200
Colts	1,030	20,600
Mules	983	58,900
Sheep—Common	25,000	100,000
Angora Goats	1,500	6,000
Common Goats	1,510	2,265
Wool (pounds)	200,000	$25,000

Wines, Brandies, Etc.

Number of wineries, 10; number of distilleries, 2.

	Gallons.	Value.
Claret wine	50,000	$15,000
Brandy	1,800	1,440

Dairy Industry.

	No.	Production.	Value.
Creameries	3	72,000	$21,600
Butter (pounds)	--	144,000	36,000

Forest Products.

	Amount.	Value.
Area of timber lands—		
Pine (acres)	50,000	------
Sawmills—No., 1	------	$3,000
Charcoal (sacks)	7,500	3,100
Lumber—Pine (feet)	60,000,000	120,000
Total value		$126,100

Miscellaneous Products.

	Pounds.	Value.
Bees (hives)—No., 12,000	------	$48,000
Beeswax	2,000	500
Honey	100,000	10,000
Sugar beets (tons)	182,000	950,000

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value of Product.
Bookbinderies	1	1	------	------
Brick	3	15	800,000	$6,400
Cigars	1	2	50,000	2,000
Confectionery (pounds)	5	12	10,560	2,112
Hides (number)	--	----	6,000	3,250
Tallow (barrels)	--	----	9,600	4,608
Olive oil (gals.)	3	10	5,000	10,000
Planing mills	4	20	------	----
Sugar, Beet (tons)	1	620	36,400	3,094,000

Productions Shipped Out of State.

	Amount.
Apples, dried	714,000 lbs.
Lemons (350 cars)	119,200 boxes
Oranges	125,280 boxes
Prunes, dried	100,000 lbs.
Walnuts	2,300,000 lbs.
Beans, dried	47,040,000 lbs.
Honey	600,000 lbs.
Olive oil	1,250 gals.
Olives, pickled	16,250 gals.
Sugar, Beet	20,000 tons

YOLO COUNTY.

Yolo County is acknowledged by those at all acquainted with its wonderful fertility to be the gem of the great Sacramento Valley. Approaching it from the north or from the south, one is impressed with the increasing richness of the soil.

About four fifths of its area is level, but the western portion breaks into hills, with cañons and valleys of considerable extent, chief among which is Capay Valley, noted as one of the earliest fruit sections of the State. The hills are nearly all used for grazing, except the numerous homesteads. Along the eastern side of the county, near the Sacramento River, is what is known as the "tule basin," which contains about 40,000 acres. These lands are overflowed during high water, but as the water recedes furnish rich pasture for immense herds of stock. The county has very little waste land.

The two principal streams are Putah Creek and Cache Creek, the former being the boundary line, for a portion of the way, between Solano and Yolo counties. Cache Creek is the outlet of Clear Lake. Its elevation is 1,300 feet above sea-level, and with Cache Creek as its only outlet, it will be seen that nature has furnished a magnificent natural reservoir. It is estimated that 50,000 horsepower could be generated by its waters, and that there would be enough left to irrigate every acre of land on each side of the creek, after it reaches the valley.

During high water Cache Creek has brought down from the hills and mountains immense quantities of the very cream of the soil, and for ages has been depositing this upon the land. The result is that there is a rich sedimentary deposit of from 20 to 30 feet in depth, entirely without hardpan, which is as rich as the valley of the Nile. This is particularly true of a large area around Woodland. It is ideal fruit land. You may find growing on this soil wheat, barley, oats, corn, alfalfa, all the vegetables of a temperate and sub-tropical climate, apples, apricots, nectarines, plums, pears, peaches, prunes, oranges, lemons, limes, figs, pomegranates, grapes (table, wine, and raisin), olives, almonds, walnuts, berries, and melons. Some of these lands are better adapted to particular crops than others, yet there are eighty-acre tracts of this sedimentary soil in the valley on which everything that has been named is now produced. The foothills in the western part, from Winters to Capay, and north, as well as those bordering Capay Valley, are mostly very fertile, and a great many have planted orchards and vineyards, the warm soil and exemption from frost making it a very desirable location.

The products are varied. Until within a few years, the cultivated area was devoted almost entirely to the production of wheat and to stock-raising. Yolo still holds the banner as the largest producer of wheat and barley, according to acreage, but in the meantime she is coming to the front as a fruit-producer.

The grape industry is a very important item. Yolo has the honor of producing the first raisins of commerce in America, and the late R. B. Blowers was the pioneer grower. The Seedless Sultana grape, which is grown here quite extensively, makes a very plump and "meaty" raisin, and for years the Woodland Sultanas have been acknowledged by the trade to be the best in the State. The shipment of table grapes to the New York market is quite an industry.

This county is noted for producing some of the fastest horses in California, and any day, on the streets and roads, can be seen fine specimens of driving horses. Woodland has been a center from which thousands of horses and mules have been shipped during the past few years, and they have gone to all parts of the country, notably to Hawaii, the Philippines, South Africa, and the Southern States.

There are thousands of acres of alfalfa, and the area is rapidly increasing. As each acre will yield from six to eight tons of hay, it can readily be seen how important the dairy interest may become. For stock of any kind there can be no better feed than alfalfa, either green or cured for hay.

The county seat is Woodland. Its streets are wide and clean, and lined with shade trees, while here and there can still be seen some of the majestic old oaks which suggested the name of the city.

Winters is located on Putah Creek, in the southwestern part of the county, and is noted as the earliest fruit section in the State.

Davisville, also located on Putah Creek, is in a very fertile section. There are probably more almonds grown here than in any other district in the State.

Yolo is on Cache Creek. It is also in a very fine fruit section, and boasts of having the largest almond orchard in the world. It has an olive-oil and pickling plant. The olives used for oil are first dried, and then run through a mill, which separates the seed from the pulp, the latter being then pressed to extract the oil. It is claimed that this process gives an oil of superior flavor, and is the only mill in existence which uses this process. The olives, after being dried, can be stored away and will keep in that condition for an indefinite time, thus giving the mill the entire year in which to work up the product.

Esparto is near the mouth of Capay Valley, on Cache Creek. It is surrounded by a fine body of land, largely devoted to fruit, vines, and alfalfa. It is quite a shipping point for wheat and barley.

The Woodland Chamber of Commerce, the Winters Board of Trade, and the Guinda Board of Trade are active public organizations.

The Legislature of 1905 made an appropriation of $150,000 for the purchase and equipment of a University Farm and to provide instruction in agriculture in connection therewith. This farm has been located upon a tract of about 780 acres of first-class valley land contiguous to the town of Davisville. The Legislature of 1907 appropriated $132,000 for additional buildings, equipment, etc. Courses of instruction are in preparation. (See page 53.)

STATISTICS OF YOLO COUNTY, 1905-6.

General Statistics.

Area, 1,017 square miles, or 650,880 acres.	
Number of farms	1,710
Number of acres assessed	597,313
Value of country real estate	$10,387,963
Of improvements thereon	$1,023,795
Of city and town lots	$808,875
Of improvements thereon	$1,428,415
Of personal property	$2,011,115
Total value of all property	$15,660,163
Expended on roads, last fiscal year	$2,535
Expended for bridges, last fiscal year	$56,105
Number of miles of public roads	700
Road levy per $100, 1906	40 cts.
Value of county buildings	$60,000
Irrigating ditches—miles, 300; cost	$100,000
Railroads, steam—miles, 87.80; assessed value	$1,427,644
Electric power lines, 1—miles, 7½; assessed value	$40,425
Number of acres irrigated	7,000

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	80,000	42,660	$1,066,500
Barley	150,000	112,500	2,137,500
Oats	1,200	50	1,250
Corn	------	51	1,224
Total cereals		155,261	$3,206,474
Alfalfa hay	15,200	75,000	$375,000
Grain hay	18,000	14,250	128,250
Total hay	33,200	89,250	$503,250

Number of Fruit Trees and Vines.

	Bearing.
Apple	1,050
Apricot	185,000
Cherry	6,250
Fig	4,200
Lemon	1,500
Nectarine	320
Olive	19,885
Orange	9,200
Peach	149,000
Pear	55,600
Plum	1,200
Prune	120,000
Quince	325
Almond	122,300
Chestnut	1
Pecan	100
Walnut	3,000
Banana	1
Other kinds—	
Trees	2,500
Vines	50,000
Total fruit trees	678,932
Raisin and table grapes (acres)	1,800
Wine grapes (acres)	1,000
Total acres grapes	2,800

Fruit Trees and Vines—Continued.

		Bearing.
Blackberries	acres.	6
Gooseberries	acres.	1
Strawberries	acres.	3
Total acres berries		10

Fruit, Vegetables, Etc.

Green—	Total Production, Pounds.	Value.
Apples	19,000	$350
Apricots	376,500	9,412
Asparagus	18,375	735
Blackberries	20,000	600
Beans	50,000	1,500
Beets	35,500	1,240
Cabbage	216,250	3,243
Celery	43,000	860
Cauliflower	46,000	920
Corn	123,500	617
Gooseberries	7,000	245
Grapes	16,756,900	167,569
Lemons (boxes)	36	112
Olives, pickled (gals.)	3,500	2,100
Olive oil (gals.)	950	2,375
Oranges (boxes)	2,250	1,125
Olives	240,000	7,200
Pears	1,867,000	37,340
Peaches	3,256,950	56,996
Peas	43,300	1,515
Persimmons	500	20
Plums	864,600	25,938
Irish potatoes	200,000	1,500
Sweet potatoes	10,000	150
Prunes	1,200,000	12,000
Strawberries	5,000	250
Tomatoes	572,500	5,735
Total value		$341,647

Dried—	Pounds.	Value.
Almonds	465,857	$69,878
Apricots	92,627	14,357
Beans	12,700	317
Figs	1,522,295	38,057
Onions	215,000	4,300
Pears	26,835	2,415
Peaches	674,667	67,466
Plums	7,290	164
Prunes	2,222,186	49,990
Raisins	832,154	33,286
Walnuts	350	35
Totals	6,071,961	$280,274

Canned—	Cases.	Value.
Apples	100	$270
Apricots	3,300	9,900
Cherries	200	900
Grapes	480	1,080
Pears	200	640
Peaches	11,000	3,300
Plums	600	1,320
Tomatoes	11,000	1,705
Totals	26,880	$19,115

Forest Products.

	Amount.	Value.
Fuel, wood (cords)	2,000	$11,000

STATISTICS OF YOLO COUNTY, 1905-6—Continued.

Wines, Brandies, Etc.

Number of wineries, 1; number of breweries, 1.

	Gallons.	Value.
Wine—Claret	5,000	$2,000
Muscatel	58,460	35,076
Sherry	34,785	20,871
Totals	98,245	$57,946
Beer (barrels)	2,100	$12,600

Fish Industry.

	Pounds.	Value.
Salmon	375,000	$37,500
Other kinds	450,000	31,500
Totals	825,000	$69,000

Livestock Industry.

	Number.	Value.
Cattle—Beef	721	$18,025
Stock	9,190	125,740
Thoroughbred	500	25,000
Dairy Cows—Graded	5,910	155,800
Calves	2,630	26,105
Swine	11,125	33,445
Horses—		
Thoroughbred	50	4,945
Standard-bred	508	25,410
Common	4,630	138,905
Colts	609	12,185
Mules	2,801	168,080
Sheep—		
Imported or fine	1,500	7,540
Common	43,560	108,915
Lambs	1,775	1,775
Angora Goats	2,550	7,000
Total stock all kinds	88,109	$858,870
Wool (pounds)	350,000	$49,000
Mohair (pounds)	10,200	2,500

Poultry and Eggs.

	Dozen.	Value.
Chickens	5,584	$25,128
Ducks	92	414
Geese	75	675
Turkeys	664	1,394
Eggs	342,520	68,500
Total value		$96,111

Dairy Industry.

	Production.	Value
Creameries, 2.		
Skimming stations, 3.		
Butter (pounds)	779,660	$148,135
Cheese (pounds)	182,500	27,375
Cream (gallons)	34,715	52,072

Miscellaneous Products.

	Pounds.	Value.
Bees (hives) No., 1390	------	$5,170
Honey	72,000	5,760
Hops	1,903,380	264,775
Alfalfa seed	26,000	3,900
Sugar beets (tons)	733	4,010

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value of Product.
Cigars	2	6	312,000	$14,060
Confectionery (pounds)	1	5	34,000	8,500
Flouring mills (barrels)	1	20	52,615	236,765
Machinery	1	6	------	6,000
Meat prod'cts—				
Fresh meat (pounds)	----	----	1,294,572	103,565
Hides (pounds)	----	----	231,760	23,176
Lard (pounds)	----	----	55,200	60,720
Meat packed	----	75	------	22,500
Tallow (barrels)	----	----	1,127	18,032
Stock shipped out (cars)	----	----	200	213,700
Pickles (gals.)	----	----	2,400	960
Sandstone (cu. ft.)	----	----	75	------

Productions Shipped Out of State.

	Amount.
Almonds	465,857 lbs.
Apricots, fresh	376,500 lbs.
Apricots, dried	82,627 lbs.
Grapes, dried	1,510,295 lbs.
Peaches, fresh	3,202,950 lbs.
Peaches, dried	634,667 lbs.
Pears, fresh	1,855,000 lbs.
Pears, dried	24,835 lbs.
Plums, fresh	864,600 lbs.
Plums, dried	7,291 lbs.
Prunes, fresh	1,200,000 lbs.
Prunes, dried	2,222,186 lbs.
Raisins	798,742 lbs.

YUBA COUNTY.

Yuba County comprises about 105,000 acres of valley land, 100,000 acres of foothill land, and 195,000 acres of mountainous land. It extends from the Feather and Bear rivers to high in the Sierras, and is centrally located in the Sacramento Valley. In the mountains lumbering, mining, and stock-raising are the leading industries. The mining industry is receiving more attention than at any other time in the past. In the valley, at the edge of the foothills, dredge mining has become quite an industry; at present there are ten dredges at work on the Yuba River.

Yuba is a great county for agricultural pursuits. When the soil and climatic conditions are considered, the land will produce almost any kind of a crop. At present it is devoted chiefly to grain and stock raising, but there are many orchards and vineyards which are thriving. Poultry-raising has also been found to be a very profitable industry.

Marysville, the county seat, is the principal town, and is a wholesale center of some note, having excellent transportation facilities in all directions by rail and stage. It has one of the largest and best equipped woolen mills on the coast, also a large and well-equipped flouring mill, and six machine shops for the manufacture of centrifugal pumps of all sizes. There is at present in course of construction a large machine shop and foundry for the manufacture of dredge and all kinds of mining machinery.

The Western Pacific Railroad is building into and through the City of Marysville, as is also the Northern Electric Railroad. The latter road is about completed between Marysville and the towns of Oroville and Chico, and the company is now constructing its roadbed from Marysville toward Sacramento. A survey for an electric railroad has been completed from Marysville to Grass Valley, Nevada City, and Auburn, and the road will be built as soon as the necessary rights of way have been secued.

STATISTICS OF YUBA COUNTY, 1905-6.

General Statistics.

Area, 625 square miles, or 400,000 acres.	
Number of farms	900
Number of acres assessed	380,508
Value of country real estate	$2,492,920
Of improvements thereon	$470,280
Of city and town lots	$420,940
Of improvements thereon	$936,485
Of personal property	$1,288,935
Total value of all property	$5,609,560
Expended on roads, last fiscal yr.	$15,000
Expended for bridges, last fiscal year	$20,000
Number of miles of public roads	427
Road levy per $100, 1906	40 cts.
Value of county buildings	$81,000
Irrigating ditches; cost	$146,000
Railroads, steam; assessed value	$524,904
Electric power plants—1; assessed value	$164,000
Electric power lines—assessed value	$54,000

Cereal Products and Hay.

Tons of 2,000 pounds.

	Acres.	Tons.	Value.
Wheat	13,780	2,480	$59,520
Barley	5,605	1,401	28,020
Oats	4,530	1,369	34,125
Corn	10	6	150
Total cereals	23,925	5,256	$121,815
Alfalfa hay	655	1,637	$13,096
Grain hay	8,400	16,800	151,200
Total hay	9,055	18,437	$164,296

Poultry and Eggs.

	Dozen.	Value.
Chickens	2,628	$10,554
Turkeys	150	3,420
Eggs	130,000	26,000
Total value		$39,974

STATISTICS OF YUBA COUNTY, 1905-6—Continued.

Number of Fruit Trees and Vines.

	Bearing.	Non-Bearing.	Total.
Apple	400	1,090	8,490
Apricot	15,000	4,100	19,100
Cherry	10,000	3,000	13,000
Fig	4,000	2,000	6,000
Lemon	3,700	2,100	5,800
Olive	8,000	1,800	9,800
Orange	33,800	29,600	63,400
Peach	61,300	27,000	88,300
Pear	17,600	3,100	20,700
Prune	21,300	5,600	26,900
Almond	5,000	700	5,700
Walnut	2,100	560	2,660
Total fruit trees	189,200	80,650	269,850
Raisin grapes (acres)	165	15	180
Table grapes (acres)	70	20	90
Wine grapes (acres)	350	45	395
Total acres grapes	585	80	665

Fruit, Vegetables, Etc.

	Total Production, Pounds.	Value.
Green—		
Apples	50,000	$5,000
Grapes	5,000,000	55,000
Pears	350,000	8,750
Peaches	800,000	14,000
Prunes	400,000	2,000
Tomatoes	80,000	360
Total value		$85,110
Dried—	Pounds.	Value.
Almonds	50,000	$6,250
Apricots	300,000	9,000
Pears	80,000	8,000
Peaches	100,000	8,000
Prunes	400,000	14,000
Raisins	100,000	2,500
Totals	1,030,000	$47,750
Canned—	Cases.	Value.
Pears	1,100	$3,300
Peaches	14,000	42,000
Tomatoes	1,200	1,800
Totals	16,300	$47,100

Dairy Industry.

	Production.	Value.
Butter (pounds)	400,000	$100,000
Cream (gallons)	1,500	2,000

Forest Products.

	Amount.	Value.
Area of timber lands (acres)	17,369	$57,540
Sawmills (number)	2	5,500
Lumber—Pine (feet)	1,800,000	37,800
Total value		$100,840

Power used for mills and manufactories in county: Steam—number, 2 (sawmills); electrical—number, 5 (1 flour mill, 1 woolen mill, 2 planing mills, 1 ice plant); water—number 1.

Livestock Industry.

	Number.	Value.
Cattle—Stock	12,251	$122,515
Thoroughbred	1,112	33,355
Calves	570	2,850
Swine	2,542	5,085
Horses—		
Thoroughbred	20	4,000
Common	3,718	70,360
Colts	670	6,700
Mules	819	16,375
Jacks and Jennies	10	1,260
Sheep—Common	32,947	65,895
Lambs	------	240
Common goats	1,430	2,860
Total stock all kinds	56,089	$331,495

Miscellaneous Products.

	Pounds.	Value.
Hops	------	$37,560

Manufactories.

	No.	No. of Employés.	Quantity Produced.	Value of Product.
Bookbinderies	2	2	------	$6,656
Carriages and wagons	2	5	21	3,400
Cigars	3	6	175,000	12,000
Confectionery (pounds)	2	5	------	30,000
Flouring mills	1	15	------	------
Foundries and iron works	1	12	------	8,000
Furniture	1	8	------	1,200
Leather goods	3	8	------	15,000
Machinery (hydraulic)	1	3	150	6,000
Malt (tons)	1	4	60	13,000
Meat products—				
Hides (po'nds)	----		60,000	4,800
Lard (pounds)	----		50,000	5,000
Meat packed (pounds)	----		50,000	5,000
Tallow (lbs.)	----		30,000	1,050
Planing mills	3	----	------	43,500
Woolen mills (yards)	1	137	404,556	300,000
Horse collars (dozen)	1	1	60	2,000
Ice (tons)	1	6	300	12,000
Soda waters	1	----	------	7,500

One brewery makes 2,000 barrels of beer, worth $13,000.

Productions Shipped Out of State.

	Amount.
Almonds	50,000 lbs.
Apples, fresh	50,000 boxes
Grapes, fresh	500,000 lbs.
Peaches, dried	100,000 lbs.
Peaches, canned	14,000 cases
Pears, fresh	2,400,000 boxes
Pears, dried	80,000 lbs.
Pears, canned	1,100 cases
Prunes, dried	400,000 lbs.
Quinces	100,000 lbs.
Beans, dried	300,000 lbs.
Tomatoes, fresh	2,000 boxes
Tomatoes, canned	1,200 cases
Flour	30,000 bbls.
Cucumbers	30,000 boxes